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IRRIGATION DEPARTMENT, PUNJAB.

ADMINISTRATION REPORT

FOR

1918-19.

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ADMINISTRATION REPORT FOR THE YEAR 1918-19.

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PUNJAB CANALS.

Year.	AREA IRRIGATED, IN ACRES.		
	Punjab Canals, Major Works.	Punjab Canals, Minor Works	Total.
1887-1888 ...	1,422,775	918,328	2,341,103
1888-1889 ...	1,749,957	997,428	2,747,385
1889-1890 ...	1,863,156	994,710	2,858,166
1890-1891 ...	2,033,500	982,956	3,016,456
1891-1892 ...	2,144,392	1,049,154	3,193,546
1892-1893 ...	1,847,882	1,079,709	2,927,591
1893-1894 ...	1,903,654	958,604	2,862,318
1894-1895 ...	1,855,858	1,063,296	2,919,154
1895-1896 ...	2,852,383	939,200	3,791,583
1896-1897 ...	3,619,303	960,110	4,609,413
1897-1898 ...	4,053,289	1,158,360	5,211,649
1898-1899 ...	3,872,501	984,964	4,856,765
1899-1900 ...	4,861,972	859,522	5,214,494
1900-1901 ...	4,642,852	1,837,699	6,000,551
1901-1902 ...	4,491,638	981,521	5,473,359
1902-1903 ...	4,864,274	815,690	5,679,964
1903-1904 ...	5,610,787	779,547	6,390,334
1904-1905 ...	5,689,132	617,252	6,306,394
1905-1906 ...	6,168,369	751,067	6,911,436
1906-1907 ...	5,902,995	803,317	6,706,312
1907-1908 ...	5,513,396	521,558	6,034,944
1908-1909 ...	6,385,050	968,006	7,353,146
1909-1910 ...	6,117,004	969,607	7,056,611
1910-1911 ...	6,270,757	956,255	7,227,012
1911-1912 ...	7,469,645	862,247	8,331,892
1912-1913 ...	7,461,251	968,130	8,429,391
1913-1914 ...	7,351,721	971,743	8,323,464
1914-1915 ...	7,683,628	1,079,413	8,963,041
1915-1916 ...	7,982,532	902,279	8,884,811
1916-1917 ...	8,493,867	1,085,937	9,579,824
1917-1918 ...	7,936,858	1,077,513	9,063,901
1918-1919 ...	8,348,146	667,839	9,015,984

From 1894-95 to 1905-06 the total areas shown are net, thereafter the areas are gross.

The areas include the Swat River Canal up to 1900-01, after which date the canal was transferred to the North-West Frontier Province.

PUNJAB CANALS, MAJOR WORKS.

YEAR.	AREA IRRIGATED, IN ACRES.			REMARKS.
	Kharif.	Rabi.	Total	
1887-1888	645,846	776,929	1,422,775	Lower Chenab Canal opened.
1888-1889	715,632	1,034,925	1,749,957	
1889-1890	661,677	1,201,779	1,863,456	
1890-1891	757,535	1,275,965	2,033,500	
1891-1892	697,454	1,146,938	2,144,392	Sirsa Branch of Western Jumna Canal opened.
1892-1893	323,235	1,024,647	1,847,882	Decrease due entirely to the favourable winter rains of 1892-93 which greatly contracted the irrigated rabi area.
1893-1894	711,001	1,192,653	1,903,654	Decrease as compared with 1891-92, due to general rainfall in rabi 1893-94, and would have been greater but for new irrigation on Chenab Canal.
1894-1895	703,930	1,151,916	1,855,858	Decrease due to very favourable rainfall during rabi, particularly in Sirhind and Western Jumna Canal tracts.
1895-1896	985,827	1,866,556	2,852,383	Increase chiefly due to partial failure of rains of 1895 and subsequent drought.
1896-1897	1,534,969	2,114,334	3,649,303	Increase due to drought.
1897-1898	1,777,565	2,275,724	4,053,289	Increase due to favourable year for irrigation and extensions.
1898-1899	1,413,823	2,458,679	3,872,501	Decrease in kharif due to favourable state of rivers and scanty rainfall.
1899-1900	1,888,898	2,496,574	4,384,972	
1900-1901	2,354,174	2,288,678	4,642,852	
1901-1902	1,686,043	2,805,795	4,491,838	Lower Jhelum Canal opened.
1902-1903	2,071,363	2,792,911	4,864,274	The Upper Sutlej Inundation Canals were transferred from head "Minor Works" to "Major Works" from 1st April 1902.
1903-1904	2,450,739	3,160,048	5,610,787	The Indus Inundation Canals were transferred from head "Minor Works" to "Major Works" from 1st April 1903.
1904-1905	2,381,786	3,307,346	5,689,132	
1905-1906	2,294,460	3,668,911	6,163,371	Decrease in kharif due to cotton failure.
1906-1907	2,435,219	3,467,776	5,902,995	
1907-1908	2,226,291	3,289,095	5,515,386	Decrease due to abnormally low supplies in the rivers.
1908-1909	2,695,518	3,693,532	6,385,050	
1909-1910	2,285,870	3,831,134	6,117,004	
1910-1911	2,254,333	4,016,424	6,270,757	
1911-1912	2,755,324	4,714,321	7,469,645	
1912-1913	2,929,309	4,531,942	7,461,251	Upper Chenab Canal opened.
1913-1914	3,069,950	4,281,771	7,351,721	Lower Bari Doab Canal opened.
1914-1915	3,184,751	4,698,877	7,883,628	
1915-1916	2,886,578	5,095,954	7,982,532	Upper Jhelum Canal opened.
1916-1917	3,441,467	5,052,400	8,493,867	Decrease in kharif due to drought and abnormally low supplies in the rivers.
1917-1918	3,333,822	4,652,566	7,986,388	Decrease in rabi due to unusually low supplies in rivers and failure of winter rains.
1918-1919	3,465,286	4,882,860	8,348,146	Decrease due to excessive rains in kharif and to some of the land flooded by rain in October not drying up early enough to permit of rabi irrigation.

The areas include the Swat River Canal up to 1900-1901, after which date the canal was transferred to the North-West Frontier Province.

From 1894-1895 to 1905-1906 the total areas shown are net; thereafter the areas are gross.

PUNJAB CANALS, MINOR WORKS.

YEAR.	AREA IRRIGATED, IN ACRES.			REMARKS.
	Kharif.	Rabi.	Total.	
1887-1888	503,693	413,133	916,826	
1888-1889	571,558	425,870	997,128	
1889-1890	512,112	452,598	964,710	
1890-1891	520,108	462,518	982,836	
1891-1892	452,192	526,664	1,019,156	
1892-1893	191,151	588,558	1,079,709	Rivers rose late, but subsequent supplies were good, and rainfall was favourable, the result being the largest area on record up to date.
1893-1894	400,917	518,747	958,664	Decrease due to the destruction of kharif crops by high floods and to less favourable working of the canals.
1894-1895	500,219	563,018	1,063,296	
1895-1896	477,937	461,213	939,290	
1896-1897	503,745	426,365	920,110	
1897-1898	505,582	502,778	1,158,360	
1898-1899	453,402	530,862	984,264	
1899-1900	520,890	538,629	859,519	
1900-1901	660,568	688,138	1,357,699	
1901-1902	508,416	573,105	981,521	
1902-1903	421,819	520,871	815,690	Decrease due chiefly to the transfer of the Upper Sutlej Irrigation Canals from head "Minor Works" to "Major Works" from 1st April 1902.
1903-1904	316,415	463,129	779,547	Decrease due chiefly to the transfer of the Indus Irrigation Canals from head "Minor Works" to "Major Works" from 1st April 1903.
1904-1905	296,626	329,616	617,232	
1905-1906	298,279	452,783	751,067	
1906-1907	295,898	507,110	803,317	
1907-1908	238,071	266,481	521,559	
1908-1909	442,098	526,008	968,096	
1909-1910	426,020	518,597	969,607	
1910-1911	450,270	497,015	956,285	
1911-1912	402,631	439,606	862,217	
1912-1913	407,957	500,173	908,130	
1913-1914	464,572	506,671	971,743	
1914-1915	466,107	613,306	1,079,413	
1915-1916	362,607	533,672	902,279	Decrease due to drought and abnormally low supplies in the rivers.
1916-1917	432,348	633,609	1,065,957	
1917-1918	463,729	613,781	1,077,518	Decrease due to excessive rainfall.
1918-1919	313,334	354,504	667,838	Decrease due to low river supplies and adverse climatic conditions.

The above includes the areas irrigated by the Shahpur Provincial Canals from 1890-1891 inclusive.

The above includes the areas irrigated on Ghaggar Canals, British and Bikaner State.

From the year 1891-1895 to 1905-1906 the areas shown are net; thereafter the areas are gross.

PUNJAB CANALS, MAJOR WORKS.

YEAR.	Capital outlay - Direct and Indirect to end of year.	Interest charges to end of year.	Net revenue to end of year.	Accumulated profits to end of year (column 4— column 3).	FOR THE YEAR.				
					Gross revenue.	Working expenses.	Net revenue.	Percentage on capital.	
	1	2	3	4	5	6	7	8	9
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
1897-1898	...	5,70,25,623	3,18,45,764	5,00,35,631	1,90,58,807	40,05,023	17,01,249	23,04,076	3·99
1898-1899	...	5,89,48,409	3,40,74,459	6,93,27,639	1,92,53,180	43,64,093	19,72,987	23,92,007	4·06
1899-1900	...	6,00,98,478	3,63,49,808	5,01,80,320	1,98,30,512	49,66,797	21,14,115	28,52,682	4·74
1900-1901	...	6,21,71,861	3,80,93,707	5,09,37,074	2,11,43,807	58,30,410	21,73,686	36,56,754	5·85
1891-1892	...	6,70,91,020	4,11,74,623	6,36,26,120	2,34,51,603	60,40,990	22,51,939	37,89,052	5·85
1892-1893	...	6,97,92,824	4,37,09,097	6,79,83,641	2,42,54,617	63,09,149	24,51,631	43,57,518	6·24
1893-1894	...	7,34,89,876	4,65,48,772	7,08,59,491	4,43,40,719	63,50,007	24,45,000	29,05,847	3·95
1894-1895	...	7,61,05,573	4,94,29,432	7,42,01,403	2,47,75,001	69,65,551	26,50,549	33,15,002	4·33
1895-1896	...	8,02,57,067	5,24,41,535	7,87,76,591	2,63,35,026	70,98,251	28,40,474	42,57,780	5·31
1896-1897	...	8,41,00,255	5,56,01,316	8,50,31,033	3,10,32,817	1,09,44,448	30,87,005	78,57,443	9·34
1897-1898	...	8,70,19,865	5,89,02,163	9,50,26,226	3,67,44,063	1,21,88,419	31,86,227	80,02,192	10·35
1898-1899	...	8,92,16,631	6,22,82,641	10,44,91,814	4,22,09,173	1,24,07,093	35,51,505	68,55,593	9·93
1899-1900	...	9,03,47,216	6,67,49,487	11,37,77,761	4,80,28,274	1,34,14,661	41,28,714	92,85,944	10·21
1900-1901	...	9,20,75,977	6,92,70,350	12,40,93,246	5,49,21,687	1,46,10,130	43,01,651	1,03,14,455	11·20
1901-1902	...	6,01,41,688	6,93,30,552	13,15,68,916	6,15,78,304	1,40,35,198	43,26,919	1,03,08,279	11·53
1902-1903	...	10,34,61,088	7,53,30,849	14,45,26,777	8,01,89,028	1,86,14,604	49,22,673	1,17,91,921	11·89
1903-1904	...	10,63,07,917	8,03,38,374	15,62,78,699	7,70,42,625	1,85,73,691	57,18,671	1,28,55,020	12·02
1904-1905	...	10,57,58,316	8,44,56,907	17,16,51,215	8,71,91,335	1,90,10,693	62,38,247	1,03,72,346	12·29
1905-1906	...	11,01,61,710	8,86,86,602	19,37,47,723	9,51,11,108	1,83,86,608	66,90,266	1,17,46,302	10·66
1906-1907	...	11,11,10,550	9,23,04,017	19,79,51,811	10,58,47,761	2,21,75,707	69,78,097	1,51,07,700	18·68
1907-1908	...	11,23,63,171	9,59,51,570	21,10,52,103	11,50,70,223	2,02,79,693	71,78,407	1,31,00,292	11·64
1908-1909	...	11,23,02,325	9,96,57,325	22,48,80,401	12,52,23,070	2,11,00,012	72,71,714	1,38,28,298	12·26
1909-1910	...	11,63,18,773	10,33,19,741	23,03,61,131	18,80,41,803	2,23,99,978	70,19,245	1,44,80,733	12·78
1910-1911	...	11,43,31,721	10,70,28,003	23,49,75,785	14,79,47,602	2,34,16,942	78,02,201	1,50,14,651	18·66
1911-1912	...	11,62,22,814	11,09,11,169	27,87,29,708	16,29,18,599	2,71,10,441	83,56,453	1,67,58,983	16·18
1912-1913	...	14,02,99,761	11,96,74,357	29,78,41,169	17,91,06,812	3,27,03,330	86,61,929	2,41,11,401	10·48
1913-1914	...	16,77,87,610	12,53,60,785	32,87,60,670	19,84,18,885	3,47,39,617	88,11,010	2,69,28,501	15·45
1914-1915	...	17,17,13,716	13,11,06,084	34,90,07,666	21,70,01,582	3,45,62,445	93,21,449	2,62,97,996	14·70
1915-1916	...	21,03,51,484	14,40,01,291	37,20,65,954	22,82,04,073	3,45,89,504	1,09,81,516	2,86,58,288	10·90
1916-1917	...	22,00,16,193	15,10,65,128	40,13,27,395	25,02,02,267	3,90,31,912	1,09,70,471	2,86,61,441	12·99
1917-1918	...	22,33,05,104	16,85,49,620	42,80,20,809	26,94,77,289	3,78,03,205	1,11,03,851	2,66,99,414	11·95
1918-1919	...	22,45,11,651	16,61,18,295	45,63,27,320	29,22,09,025	4,13,14,012	1,10,14,431	3,03,00,611	13·60

*Excludes the figures relating to the Swat River Canal, which now belongs to the North-West Frontier Province. The figures up to 1900-1901 include the figures of that canal.

The gross revenue in column 6 is that actually collected during the year and differs from the revenue as assessed on the area irrigated in the year.

GOVERNMENT OF THE PUNJAB.
PUBLIC WORKS DEPARTMENT.

Irrigation Branch.

No. 7-R. I.

The 7th January 1920.

Resolution by His Honour the Lieutenant-Governor of the Punjab and its Dependencies.

READ—

Administration Report by the Chief Engineer, Irrigation Works, Punjab, of the Canals in the Punjab for the year 1918-19.

Capital Outlay.

THE total outlay to date (direct and indirect) on canals in operation, classed as Productive, or Major, Works, amounted to Rs. 23,99,94,465, including Rs. 1,54,82,914 contributed by Native States. During the year the nett expenditure was Rs. 12,07,566 (Imperial Rs 12,06,387, Contribution Rs. 1,179) after deducting a sum of Rs. 6,96,398 which was realized mainly—

- (a) from sale of surplus stores and Tools and Plant rendered available by the completion of works on the Triple Canals ; and
- (b) from colonists on account of cost of watercourses which Government had built for them in advance, in order to secure rapid development of irrigation on the Triple Canal System.

The corresponding expenditure in preceding years was Rs. 26,92,930 in 1917-18 and Rs. 36,80,096 in 1916-17, the decrease being due to the completion of the Triple Canal System, the construction estimate of which was closed on 31st March 1917, and to labour and transport difficulties, which interfered with the completion of certain works on the Lower Chenab and Lower Jhelum Canals.

Nature of seasons.

2. *Kharif, 1918.*—Conditions were unfavourable at first, as the preceding *rabi* season had been exceptionally dry, and less moisture than usual remained in the soil. Rainsfall in March assisted the preliminary sowings, particularly of cotton and cane, but the conditions of April and May were again unfavourable, and the crops received little or no assistance from rain. The monsoon began in June, but the current was extremely weak, and breaks in the rains occurred more often than usual. Rainfall improved during the latter half of August, but failed thereafter ; and the total rainfall from June to September was very much below the normal. The sowings were restricted, and standing crops suffered through the insufficiency of the monsoon rains, and from attacks by grasshoppers and other insects.

The scanty monsoon resulted in low river levels, and the Inundation Canals drew less water than usual. The demand for canal water was very keen ; and on the perennial canals it was, on the whole, satisfactorily met ; as the river supplies, though lower than usual, were under complete control.

Rabi, 1918-19.—The river supplies fell very early in the season, owing to the very poor monsoon rainfall, and much of the available water was utilized by the cultivators for the maturing of their *kharif* crops. *Rabi* sowings were further interfered with by the influenza epidemic of October and November 1918. There was some rainfall in the second week of December, advantage of which was taken for *rabi* sowings. A period of dry weather then ensued and lasted till end of January, when there was a substantial fall of rain throughout

the Province, doing immense good to the crops. Thereafter the weather was generally dry till the end of March, when light, but fairly general, rain fell, which further benefitted the standing crops.

Generally speaking, the climatic conditions were unfavourable for the sowing and maturing of the *khārif* crops, and for the sowing of the *rabi* crops.

Areas irrigated, etc.

3. The areas irrigated and matured by works of all kinds compare as follows with the corresponding figures for the two previous triennia and for the year 1917-18:—

Particulars.	AVERAGE OF THE 3 TRIENNS ENDING		AREA IRRIGATED DURING	
	1914-15.	1917-18.	1917-18.	1918-19.
<i>Imperial and Provincial.</i>				
Area irrigated ... ,.. ,..	8,050,458	8,640,495	8,600,153	8,415,473
Area matured ... ,.. ,..	7,667,893	8,015,459	7,976,055	7,974,417
<i>Native States.</i>				
Area irrigated ... ,.. ,..	580,300	578,787	489,791	600,511
Area matured ... ,.. ,..	552,637	575,658	461,639	597,023

In the case of Imperial and Provincial Canals the area irrigated was about 20,000 acres less than in 1917-18 (a year of abnormally heavy rainfall), but the area matured was about the same in either year, the flooding of 1917-18 having done more damage than the drought of 1918-19. The area matured in 1918-19 was about 70,000 acres less than the average of the triennium ending 1917-18, but the area that failed to mature during 1918-19 was also about 60,000 acres less than that of the triennium ending 1917-18.

Of the area irrigated under the heads Imperial and Provincial, the Productive Major Works accounted for 7,748,983 acres and the Minor Works for 666,490 acres, as compared with 7,531,316 acres and 1,068,842 acres, respectively, in 1917-18, and 7,632,536 acres and 1,013,959 acres, respectively, the averages for the triennium ending 1917-18. The figures for the Minor Works, and the Inundation Canals under Major Works, were adversely affected by the low river supplies, and climatic conditions, whilst those for the perennial canals showed improved results, except on the Western Jumna and Upper Bari Doab Canals, where the cotton and *jowar* crops suffered considerably, owing to the failure of the monsoon. The decrease on these canals was partly counterbalanced by an increase on the Lower Chenab and Triple Canals. On the former the demand for canal water was unusually keen, and the figures for the *kharif* season constitute a record. On the latter the increase was due to development of irrigation.

The areas irrigated and matured in Native States showed improvement as compared with the figures of 1917-18 and with the average of the two previous triennia. These Native States enjoy a more plentiful rainfall, which renders it easier for them to dispense with canal irrigation in certain years.

4. The area on which irrigation charges were remitted amounted to 44,542 acres as compared with 626,177 acres in 1917-18, and 6,3413 acres in 1916-17. Deducting from these figures, respectively, 60,955, 101,814 and 175,718 acres, remitted under Tenancy rules (mostly on the Lower Bari Doab Canal) not for failure of crops, but as part of the terms of colonization, the area of crops that actually failed, either wholly or partially, amounted to 383,583 acres, or 4·25 per cent. of the area sown, as compared

with 524,363 acres, or 5·79 per cent. in 1917-18, and 423,940 acres, or 4·49 per cent. in 1916-17. Generally speaking, the percentage of remissions on all Canals appears to be decreasing progressively with the development of irrigation practice and experience. The remissions fall mainly under the following heads of classification :—

	Acres.
(a) Short supply	... 167,425
(b) Bad soil	... 82,785
(c) Other insects and blights	... * 55,087

The area remitted under (a) was for the most part on the Inundation Canals, as was to be expected in such an abnormally dry season, accompanied by unusually low supplies in the rivers. The remissions under (b) were granted chiefly on the Inundation Canals in the Derajat Circle and on the Lower Bari Doab Canal. The damage under (c) was due to grasshoppers and other insects destroying sugarcane, cotton, rice and *jowar*, particularly on the Western Jumna and Upper Bari Doab Canals, owing to the scarcity of grass for them to feed on during July and August.

Considering that the year was one of abnormally scanty rainfall, and of an exceptionally scanty flow in the rivers, the results were satisfactory.

Financial Results.

5. The financial results are based, not on the areas irrigated during *Kharif* 1918 and *Rabi* 1918-19, but on those of *Rabi* 1917-18 and *Kharif* 1918, water dues on account of which were realized during the financial year under review. The gross receipts from works of all kinds compare as follows with the figures for the year 1917-18 and the averages of the two triennia ending 1914-15 and 1917-18 :—

Particulars.	AVERAGE OF THE THREE YEARS ENDING		During 1917-18.	During 1918-19.		
	1914-15.	1917-18.				
	Rs.	Rs.	Rs.	Rs.		
<i>Imperial and Provincial.</i>						
Major Works	3,40,31,764	5,73,41,613	3,78,03,265	4,13,14,913		
Minor Works	16,57,540	20,10,512	21,35,091	17,00,103		
Total	3,56,89,304	5,93,52,205	3,99,38,356	4,31,65,016		
<i>Native States.</i>						
Major Works	25,21,878	20,24,971	25,00,613	22,76,164		
Minor Works	17,541	18,120	17,873	2,204		
Total	25,39,417	20,43,100	25,08,491	22,78,468		

The above figures, under Imperial and Provincial, work out to an average rate of Rs. 5·3 per acre matured.

Working Expenses.—The working expenses for the year are compared below with the figures of 1917-18 and the averages of the two previous triennia.—

Particulars,	AVERAGE OF THE THREE YEARS ENDING		During 1917-18.	During 1918-19.
	1914-15.	1917-18.		
	Rs.	Rs.		
<i>Imperial and Provincial.</i>				
Major Works	69,39,131	1,10,01,946	1,11,03,853	1,10,14,431
Minor Works	9,52,001	9,01,410	8,81,775	9,85,300
Total ...	98,91,132	1,10,03,386	1,19,85,627	1,10,99,797
<i>Native States.</i>				
Major Works	9,11,511	10,07,885	10,52,014	8,78,549
Minor works	6,851	8,203	7,762	8,513
Total ...	9,18,362	10,16,011	10,60,976	8,87,067

The decrease under Major Works was due chiefly to the postponement of certain small works on account of labour difficulties resulting from the malarial and influenza epidemics which were exceptionally severe during October and November 1918.

The increase under Minor Works occurred mainly on the Lower Sutlej Inundation Canals and the Shahpur Imperial Inundation Canals. On the former it arose from the necessity of diverting the Mailsi and Muhammadwah Canals; and on the latter from special silt clearances.

Nett Revenue.—The nett revenue for the year compares as follows with that of the previous year:—

Particulars,	AVERAGE OF THE THREE YEARS ENDING		During 1917-18.	During 1918-19.
	1914-15.	1917-18.		
	Rs.	Rs.		
<i>Imperial and Provincial.</i>				
Major Works	2,50,92,683	2,63,89,717	3,66,90,413	3,03,00,511
Minor Works	9,06,539	11,09,103	12,53,316	8,04,740
Total ...	2,69,90,172	2,74,48,810	2,79,62,729	3,11,05,251
<i>Native States.</i>				
Major Works	18,10,805	18,17,183	18,87,004	18,97,616
Minor Works	10,590	9,920	10,111	6,925
Total ...	18,20,955	18,27,059	18,48,015	18,91,391

The increase in the case of Major Works was attributable mainly to the development of irrigation, to the increased credit on account of the sale proceeds of Government waste and other lands irrigated by the Triple Canals, and to a credit of Rs. 17,10,221 on account of land revenue and malikana in the Montgomery District of the Lower Bari Doab Canal, which included arrears for the six previous years. Partly also to the record area irrigated by the Lower Chenab Canal during *Kharif* 1918.

The decrease under Minor Works was due to scanty rainfall and low supplies in the rivers during the *Kharif* season.

The nett revenue earned by Major Works, including indirect receipts, but excluding interest charges, amounted to 13·50 per cent. of the total capital outlay ; whilst direct receipts alone yielded 7·40 per cent.

The interest charges for the year amounted to Rs. 75,68,775 ; and the nett profit, after defraying interest charges, was Rs. 2,27,31,736 or 10·12 per cent. of the capital outlay to date. In the previous year the corresponding figures were Rs. 1,92,15,030, or 8·60 per cent., respectively. If the direct receipts alone are considered the nett profit, after defraying interest charges, comes to Rs. 91,27,469, or 4·06 per cent., as against 3·82 per cent., in the previous year. Under the Provincial Contract this nett profit is shared equally between the Imperial and Provincial Governments ; but if the half share of the Provincial Government in any one year falls short of 41 lakhs, the Government of India makes good the deficiency. The half share during the year under review comes to 45·6 lakhs, i.e., 4·6 lakhs more than the guaranteed minimum. The question of revising these Provincial Contracts is under the consideration of the Government of India, and it is anticipated that under the new terms proposed the Provincial Government will realize a larger share of the surplus.

The percentages of nett revenue on capital outlay in the case of each of the Major Works were as follows :—

Canal.		Excluding interest charges.	Including int. rest charges.
Western Jumna Canal	8·66
Sirhind Canal (Imperial)	0·60
Upper Bari Doab Canal	10·89
Lower Bari Doab Canal	16·55
Upper Chenab Canal	1·97
Lower Chenab Canal	43·45
Upper Jhelum Canal	0·14
Lower Jhelum Canal	20·49
Upper Sutlej Inundation Canals	25·63
Sidhuani Canal	53·52
Indus Inundation Canals	5·33

All canals showed better results than those of the previous year, with the exception of the Western Jumna, Sirhind, Lower Jhelum and Upper Chenab Canals. The decrease on the first three canals was mainly due to a decrease in area irrigated.

General Remarks.

6. The development of irrigation on the Triple Canal system has not been as rapid as was anticipated in the Project, owing mainly to a delay of about a year in the opening of the Upper Jhelum Canal. The area irrigated

by the Triple Canal system during the year under review was greater than in the preceding year, but less, by 613,198 acres, than the area forecast for this year in the Project Report. The gross receipts amounted to Rs. 74,81,679, and the working expenses to Rs. 31,90,545 ; resulting in a net revenue of Rs. 42,91,134 or 4·15 per cent. on the total capital outlay to date (Rs. 10,34,15,739). The Project forecast for the year was Rs. 76,03,731 for gross receipts. The nett profit, after defraying interest charges, which amounted to Rs. 35,15,934 during the year, comes to Rs. 7,71,200. This was the third year of irrigation from the complete Triple Canal Project which has, for the first time, been able to earn a profit after paying off both its working expenses and interest charges.

7. The length of channels in operation at the end of March 1919 was 19,654 miles, viz., 4,405 miles of main and branch canals, and 15,248 miles of distributaries. Five miles of main and branch canals and 120 miles of distributaries were open for the first time for irrigation during the year.

8. The estimated value of crops raised on all canals including those of Native States, during the year under review, was Rs. 55,08,14,095 as compared with Rs. 33,36,99,916 during the previous year. These figures represent Rs. 64 and Rs. 40, respectively, per acre matured ; the increase reflecting the rise in value of agricultural produce ; and it may be interesting to note that the value of this year's crops amounts to 2·5 times the total capital outlay on all canals system up to date. The cultivator had to pay only Rs. 5·3 per acre for water rates on crops of an average value of Rs. 64 per acre.

9. A review of the development of canal irrigation in the Punjab shows that the area irrigated in 1864-65 was only about 750,000 acres, valued at 3 crores of rupees ; whereas during the year under review the area irrigated was over 9 million acres, valued at more than 55 crores of rupees.

Fifty years ago the country was sparsely populated and subject to famine. The canals have changed all this. The population increased from 17,275,000 in 1881 to 19,975,000 in 1911, the people have become more prosperous, and the Province has been secured against famine. The canals have also contributed largely to the expansion of the railway system ; and have made possible large exports of agricultural produce, which have been especially valuable during the recent war.

10. As noticed in paragraph 11 of the last year's review, further considerable extensions of canal irrigation in the Province have been under consideration. The important projects detailed therein have been maturing during the year under review. *The Sutlej Valley Project* was still under discussion with the Bahawalpur representatives. The Report on the *Bakra Dam Project* has been received, but nothing further can be done on this Project, or on the *Haveli Project*, until the scope of the *Sutlej Valley Project* is settled finally. The Report on the *Thal Canal Project* was under preparation. The Project for the construction of the *Wular Lake Barrage in Kashmir*, to supplement the winter water supply of the river Jhelum, was awaiting the consent of the Kashmir Darbar.

11. The posts of Chief Engineer were held during the year under review by—

	<i>From</i>	<i>To</i>
Mr. W. F. Holmes	... 1-4-1918	7-12-1918
Mr. H. W. M. Ives	... 8-12-1918	31-3-1919
The Hon'ble Mr. F. W. Woods	1-4-1918	31-3-1919

and the Lieutenant-Governor desires to thank these officers and the Department generally for their valuable services during the year. It is a peculiar gratification to him to find that the work done by Mr. Woods has since been recognized by the bestowal of the Order of the C.I.E. and he desires to congratulate both Mr. Woods and the Department on the receipt of this distinction.

By order of His Honour the Lieutenant-Governor,

F. W. WOODS,

Secretary to Government, Punjab.

ADMINISTRATION REPORT
 OF THE
CANALS IN THE PUNJAB
 FOR THE YEAR
1918-19.

GENERAL.

1. The direct receipts and expenditure of the Irrigation Department during the year were as follows :—
 Direct Receipts and Expenditure.

CLASS, OR WORKS.	Direct Receipts.	DIRECT EXPENDITURE.			Total,
		Capital	Working expenses.	Total,	
	Rs.	Rs.	Rs.	Rs.	
Major Irrigation Works.	Imperial ...	2,77,10,675	11,48,168	1,02,92,076	1,14,40,244
	Contributions ...	85,329	1,179	3,97,746	3,98,925
Minor Irrigation Works.	Imperial ...	8,09,596	11,799	8,92,570	9,04,369
	Contributions ..	...	782	2,859	3,591-
Provincial Canals	...	29,464	...	36,265	36,265
GRAND TOTAL		2,86,35,081	11,61,878	1,16,21,516	1,27,83,394
Average of the three years ending 1917-18.	*	2,72,66,487	36,02,565	1,17,62,263	1,53,64,828

* Excludes "refunds of revenue."

2. The indirect revenue credited to the canals on account of Enhanced Land Revenue, etc., amounted to Rs. 1,45,55,293. Indirect Revenue. The average credit on this account of the three previous years amounts to Rs. 1,21,59,256.

3. The following table shows the areas irrigated by the several canals in 1918-19 as compared with the averages of the previous triennium and with the figures of 1917-18:—

Area irrigated.	Names of Canals.	Average of the three years ending 1917-18.	1917-18.	1918-19.
<i>Major Irrigation Works</i>				
Western Jumna Canal	{ Imperial ... Patiala State ...	720,170 72,783	650,413 74,912	658,895 61,637
Sirhind Canal	{ Imperial ... Patiala, Nabha and Jind States ...	790,191 498,042	551,734 350,160	887,875 537,526
Upper Bari Doab Canal	...	1,163,644	1,114,521	1,065,019
Lower Bari Doab Canal	...	473,277	621,600	678,004
Upper Chenab Canal	...	281,825	382,935	426,864
Lower Chenab Canal	...	2,282,644	2,277,125	2,339,198
Upper Jhelum Canal	...	147,305	177,006	246,609
Lower Jhelum Canal	...	801,460	765,470	777,496
Upper Sutlej Canals	...	341,251	437,857	258,499
Sidhuani Canal	...	295,716	318,412	229,397
Indus Canals	...	235,004	204,213	181,097
Total Major Irrigation Works.	{ Imperial ... Native States ...	7,632,536 570,827	7,531,316 455,072	7,718,983 590,163
<i>Minor Irrigation Works.</i>				
Shahpur Inundation Canals	{ Imperial ... Provincial ...	38,722 25,128	42,633 25,085	16,727 13,183
Ghaggar Inundation Canals	{ Imperial ... Bikaner State ...	24,052 7,960	21,823 4,671	11,472 1,343
Lower Sutlej Inundation Canals (including Hajiwah Canal)	...	337,517	365,184	189,946
Chenab Inundation Canals	...	201,534	229,042	126,629
Muzaffargarh Inundation Canals	...	396,976	385,075	308,563
Ravi Inundation Canals (Provincial)	...	...	...	...
Total Minor Irrigation Works.	{ Imperial ... Provincial ... Native States ...	985,831 25,128 7,960	1,013,757 25,085 8,671	653,307 13,183 1,348
Total Major and Minor Irrigation Works.	{ Imperial ... Provincial ... Native States ...	8,621,367 25,128 578,787	8,575,073 25,085 463,743	8,402,290 13,183 603,511
GRAND TOTAL	...	9,925,282	9,063,901	9,015,984

*Average of two years only.

4. The canals in the Punjab show the following results for 1918-19:—

Financial results.
I.—CANALS IN OPERATION CLASSED AS PRODUCTIVE.

Major Works.

Capital expenditure during the year.	Direct charges ..	Indirect charges ..	Rs.
	11,48,168
	58,219
		Total	12,06,387
The capital invested to end of 1918-19 amounted to	22,45,11,551
Income from all sources less refunds (Rs. 8,241)	4,13,14,942
Working expenses less refunds (Rs. 8,241)	1,10,14,431
Balance excess revenue being 13·50 per cent. on Rs. 22,45,11,551	3,03,00,511
<i>Interest—</i>			
Total direct outlay to 31st March 1919	...	21,79,55,186	Rs.
Less half outlay during 1918-19	...	5,74,064	
Mean Capital at charge	...	21,73,81,102	
Interest on Rs. 21,73,81,102 at 3·4818 per cent.	75,68,775
Net profit after paying interest in 1918-19	2,27,31,736
Ditto ditto 1917-18	1,92,15,630
Ditto ditto 1916-17	2,16,57,594

The earnings of the Major Works are shown in line 24 of the statement at pages 4 and 5.

II.—IMPERIAL CANALS, MINOR WORKS NOT CLASSED AS PRODUCTIVE.

The capital expenditure (direct and indirect) incurred during the year on those canals for which Capital and Revenue Accounts are kept, viz., Shahpur Imperial and Ghaggar Canals, amounted to Rs. 12,247. The total expenditure on such canals to end of the year was, therefore, Rs. 6,04,318.

	Rs.
The income from all sources <i>less</i> refunds (Rs. 479) amounted to	... 17,43,492
Working expenses <i>less</i> refunds (Rs. 479)	... 9,46,347
Balance profit in 1918-19	... 8,02,145
Ditto 1917-18	... 12,36,137
Ditto 1916-17	<u>... 11,36,719</u>

The financial results of each Minor Work are shown in the body of the report.

III.—PROVINCIAL CANALS.

There is only one Provincial Canal in operation, viz., the Shahpur Provincial Canal. The Ravi Inundation Canals have now ceased to exist, but the transactions shown in column 18 of the statement at page 5 relate to some adjustments effected.

	Rs.
The income from all sources <i>less</i> refunds (<i>nil</i>) amounted to	... 41,614
Working expenses <i>less</i> refunds (<i>nil</i>)	<u>... 39,019</u>
Balance profit in 1918-19 ...	... 2,595
Ditto 1917-18 ..	... 17,179
Ditto 1916-17 ...	<u>... -1,326</u>

5. The total number of dismissals and other severe punishments was 95 as compared with 100 in 1917-18 and 110 Dismissals and punishments, in 1916-17. Of this total 73 were dismissals, 26 after departmental enquiry, 1 after Judicial enquiry, 32 for serious misconduct and 14 for inefficiency. In the previous year the corresponding figures were 27, 3, 23 and 30 respectively.

Other forms of punishment were inflicted in 22 cases. In 9 of these the punishment was transfer of the culprits while in the remaining 13 cases reduction in rank or pay or both, was ordered, the corresponding figures in 1917-18 having been 2 and 9 respectively.

The total of 95, as usual, does not include minor disciplinary punishments.

PARTICULARS.	Serial No.	CANALS IN OPERATION CLASSED AS PRODUCTIVE.					
		Western Jumna Canal (including Sircind Branch).	Sircind Canal (Imperial).	Upper Bari Doab Canal	Lower Bari Doab Canal	Upper Chenab Canal	Lower Chenab Canal
I	2	3	4	5	6	7	8
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
I.—Capital (direct and indirect) outlay to end of 1917-18 ...	1	1,76,92,529	2,50,31,980	2,18,32,283	2,24,61,550	3,57,76,906	3,25,18,571
1918-19 ...	2	1,77,11,686	2,50,68,854	2,23,96,782	2,26,46,199	3,67,69,667	3,24,90,216
II.—Income realized during the year—							
Direct, viz., water rent and m.s. { 1917-18 ...	3	30,88,557	38,36,816	42,28,782	18,60,745	18,01,419	35,57,053
cellaneous receipts. { 1918-19 ...	4	26,50,418	27,00,280	44,10,935	22,67,317	16,08,198	39,44,064
Indirect, viz., land revenue due to Irrigation Works, including water-advantage rate. { 1917-18 ...	5	2,30,270	98,174	7,18,848	2,32,002	3,53,850	37,00,092
{ 1918-19 ...	6	2,18,741	98,496	6,97,189	24,86,622	1,10,140	78,80,183
Total Direct and Indirect { 1917-18 ...	7	30,18,833	94,35,019	40,42,190	14,49,847	28,46,009	1,52,68,176
{ 1918-19 ...	8	28,75,164	29,67,716	61,06,428	40,83,829	19,87,885	1,66,24,217
III.—Charges (direct and indirect) for the year—							
Maintenances, including Establishment. { 1917-18 ...	9	18,70,721	12,54,402	18,84,188	9,13,557	10,86,813	24,60,511
{ 1918-19 ...	10	18,41,447	11,81,808	18,82,809	11,71,901	12,50,996	23,74,070
Interest on Capital outlay { 1917-18 ...	11	5,80,944	8,47,427	7,82,706	7,52,906	12,00,642	10,99,623
{ 1918-19 ...	12	5,63,144	8,51,229	7,44,778	7,69,882	12,10,823	11,01,710
Total { 1917-18 ...	13	19,57,065	21,01,910	20,66,639	18,07,763	22,87,855	35,60,094
{ 1918-19 ...	14	19,29,591	20,38,668	20,66,582	19,40,780	24,01,810	34,78,086
Profit and Loss—							
(a) Including Interest on Capital outlay. { 1917-18 ...	15	18,50,703	18,93,100	20,75,291	-24,416	57,814	1,17,03,141
{ 1918-19 ...	16	9,45,568	8,34,620	30,30,841	27,53,053	-5,04,494	1,31,44,651
Percentage on Capital out- { 1917-18 ...	17	7.67	5.20	18.17	-0.11	0.16	35.69
{ 1918-19 ...	18	5.33	3.34	19.57	12.15	-1.41	40.44
On Direct Income { 1917-18 ...	19	17,12,890	20,82,853	28,94,619	4,46,888	9,04,606	60,98,572
{ 1918-19 ...	20	18,14,066	15,67,362	30,90,920	10,95,413	5,87,190	65,69,038
Amount { 1917-18 ...	21	9.68	8.12	18.26	2.00	2.62	18.75
{ 1918-19 ...	22	7.42	6.18	18.83	4.57	1.64	20.51
On total income, Direct and Indirect { 1917-18 ...	23	19,43,112	21,60,527	36,07,097	7,29,490	12,53,450	1,28,02,664
{ 1918-19 ...	24	15,38,707	10,85,848	37,84,114	35,21,085	7,06,839	1,42,49,271
Amount { 1917-18 ...	25	10.93	8.51	10.52	3.24	3.52	39.87
{ 1918-19 ...	26	8.66	6.66	16.60	15.65	1.97	43.85

(b) Excluding Interest on Capital outlay.

Financial results.

MAJOR WORKS.							IMPERIAL CANALS, MINOR WORKS, NOT CLASSED AS PRODUCTIVE.		PROVINCIAL CANALS.		Serial No.
Upper Jhelum Canal.	Lower Jhelum Canal.	Upper Sutlej (including Lower Sohag and Para).	Sidhnai Canal.	Indus Inundation Canals.	Total Productive.	Works for which Capital and Revenue Accounts are kept.	Works for which only Revenue Accounts are kept.	Shahpur Provincial Canals.	Ravi Inundation Canals.		
9	10	11	12	13	14	15	16	17	18	19	
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.		
4,50,87,813	1,62,26,129	18,17,323	13,82,237	29,80,753	22,38,05,164	5,92,071	...	...	...	1
4,48,99,973	1,66,77,579	18,12,298	13,30,674	29,81,745	22,45,11,531	6,01,818	...	...	...	2
5,37,993	27,90,507	4,98,506	5,44,468	1,04,850	2,71,24,756	1,17,735	8,81,477	48,601	...	3	
8,00,605	26,82,010	5,52,759	6,69,630	2,00,517	2,77,10,675	73,750	7,35,840	20,484	...	4	
...	16,88,652	2,51,728	1,57,107	2,46,840	1,00,78,519	40,398	10,28,821	10,982	-1,776	5	
...	15,94,182	2,53,150	2,02,893	2,20,273	1,86,04,267	20,618	9,18,278	12,180	...	6	
5,37,993	41,20,169	7,50,281	7,01,025	4,41,890	3,78,03,271	1,68,133	10,10,801	68,488	-1,776	7	
8,00,605	42,77,101	8,40,908	8,11,028	4,29,700	4,13,14,912	94,674	10,51,118	41,614	...	8	
8,27,495	9,16,765	8,82,814	1,58,760	8,99,182	1,11,03,852	95,212	7,87,095	47,607	1,871	9	
7,37,615	8,60,215	3,70,997	95,786	2,70,880	1,10,14,431	84,801	8,01,546	39,019	...	10	
15,18,068	5,44,816	60,650	41,028	1,00,757	74,84,392	...	...	...	...	11
15,36,229	5,63,956	60,070	44,858	1,01,002	75,68,775	...	...	...	...	12
28,41,158	14,60,011	4,41,064	2,03,697	4,99,929	1,95,88,214	95,212	7,37,095	47,607	1,871	13	
22,78,874	14,19,071	4,30,007	1,40,746	3,71,898	1,85,83,200	81,801	8,01,546	39,019	...	14	
-18,03,105	29,65,549	8,09,270	4,07,928	-69,219	1,92,15,030	...	...	...	...	15
-14,78,369	28,68,080	4,04,842	6,71,177	57,002	2,27,81,736	...	...	...	...	16
-4'00	18'29	16'00	37'88	-1'95	8'60	...	...	...	...	17
-3'27	17'18	22'38	50'48	1'94	10'12	...	...	...	...	18
-2,89,502	18,74,742	-1,10,192	8,85,099	-2,04,832	1,60,20,803	22,623	1,44,392	694	-1,871	19	
62,860	18,22,701	1,70,302	5,18,742	-70,380	1,00,00,214	-11,045	-1,25,700	-9,535	...	20	
-0'64	11'55	0'89	28'96	-0'86	7'17	3'80	...	...	...	21
6'14	10'03	9'73	38'01	-2'80	7'40	-1'81	...	...	...	22
-2,89,502	35,13,304	3,07,920	5,42,856	42,608	2,66,09,423	92,021	11,73,216	20,820	-3,047	23	
62,860	34,10,886	4,04,673	7,10,186	1,68,904	3,08,00,511	9,673	7,92,572	2,596	...	24	
-0'64	21'65	20'24	40'75	1'42	11'95	10'83	...	...	...	25
'14	20'49	25'68	53'82	5'88	13'50	1'58	...	...	...	26

Major Irrigation Works.
WESTERN JUMNA CANAL.

(SUPERINTENDING ENGINEER—MR. G. C. LAURIE.)

1. *Imperial.*—The expenditure (direct and indirect) amounted to Rs. 19,157 and was incurred mainly on stock transactions. Under works the expenditure was Rs. 1,985 only but that was more than counterbalanced by a credit of Rs. 5,042 on account of the value of land surrendered. The expenditure was incurred on constructing new out-houses for the Sub-Divisional officer's residential quarters at Sirsa.

The total outlay to date was Rs. 1,77,11,686.

2. The expenditure amounted to Rs. 1,16,154 (Rs. 96,786 Imperial and Rs. 19,768 Contribution) and was incurred on numerous works for increasing the efficiency of the canal. The important works carried out were:—Extension of the training work known as the “Chhajja pitching” at Tajawala; constructing the Dhumra inlet in the Main Branch; and the new head regulator for Petwar and Hissar distributaries.

3. The expenditure amounted to Rs. 5,70,254 (Rs. 5,45,795 Imperial and Rs. 24,459 Contribution). In addition to this Rs. 21,689 and Rs. 25,283 were also spent by the Patiala and Jind States, respectively, on the maintenance of their distributaries. Apart from ordinary repairs and maintenance of channels and buildings numerous works were carried out for increasing the efficiency of the canal and improving the banks of the channels.

4. (a) *Kharif.*—The season started badly as the monsoon rains, with the exception of a few showers early in June, commenced only in the middle of August, lasted for a fortnight and failed entirely thereafter. The improvement in the latter half of August was, therefore, not sustained and the season ended badly.

Nature of season and state of demand and supply—
Kharif, 1918
Rabi, 1919-19.

The canal was in flow for 167 days. The demand was generally keen and supply sufficient to meet it, although the river was considerably below its average. There were no high floods in the river; the highest gauge registered being 24.8 feet at Ponta on the 21st August against the maximum recorded flood of 38.5 feet on the 14th August 1903.

(b) *Rabi.*—The supply fell early in the season to less than the demand owing to the very poor monsoon rainfall and its early cessation.

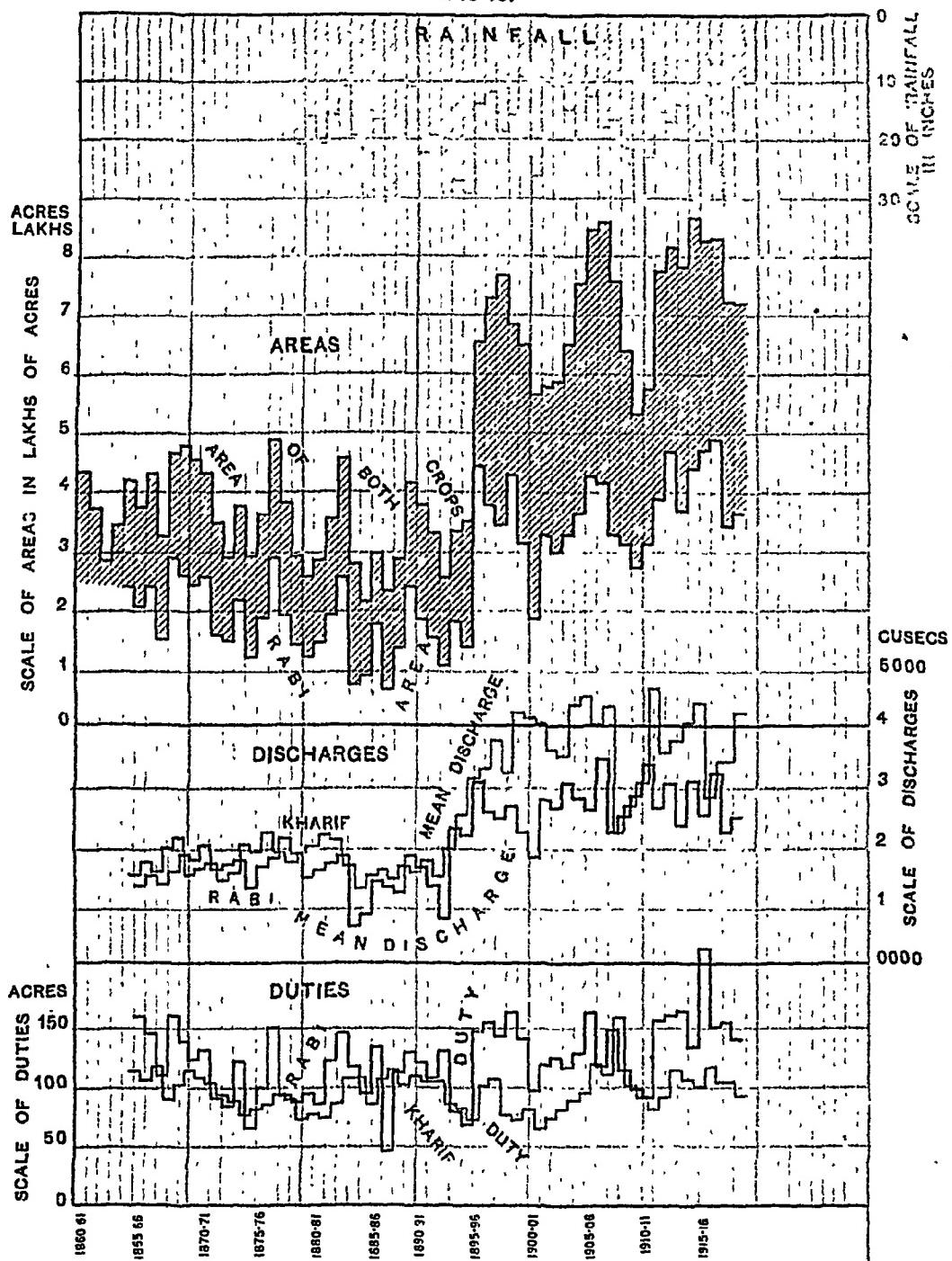
Winter rains commenced at the end of January and continued during February and March, doing considerable benefit to the crops. These rains made a closure of the canal possible which was much needed and so reduced the demand for water that the supply was sufficient during the latter part of the season. The canal was in flow for 162 days and was closed for 20 days owing to cessation of demand.

(c) *Rainfall.* The following table compares the rainfall during the year with that of 1917-18 and with the average of the years previous to 1917-18:—

Station.	1918-19.			Average previous to 1917-18.
		Inches.	Inches.	
Ponta	39.37	98.15	57.9
Tajawala	36.25	91.9	53.2
Dadupur	29.43	65.9	41.6
Indri	14.26	31.3	28.4
Karnal	21.83	35.2	26.0
Munak	10.45	31.4	22.0
Delhi	12.37	32.8	20.2
Rohtak	8.89	33.2	17.0
Hissar	9.23	37.5	13.8

WESTERN JUMNA CANAL.

WORKING RECORD.
1918-19.



N.B.—The intercepts in the red area show the Kharif acreage each year.

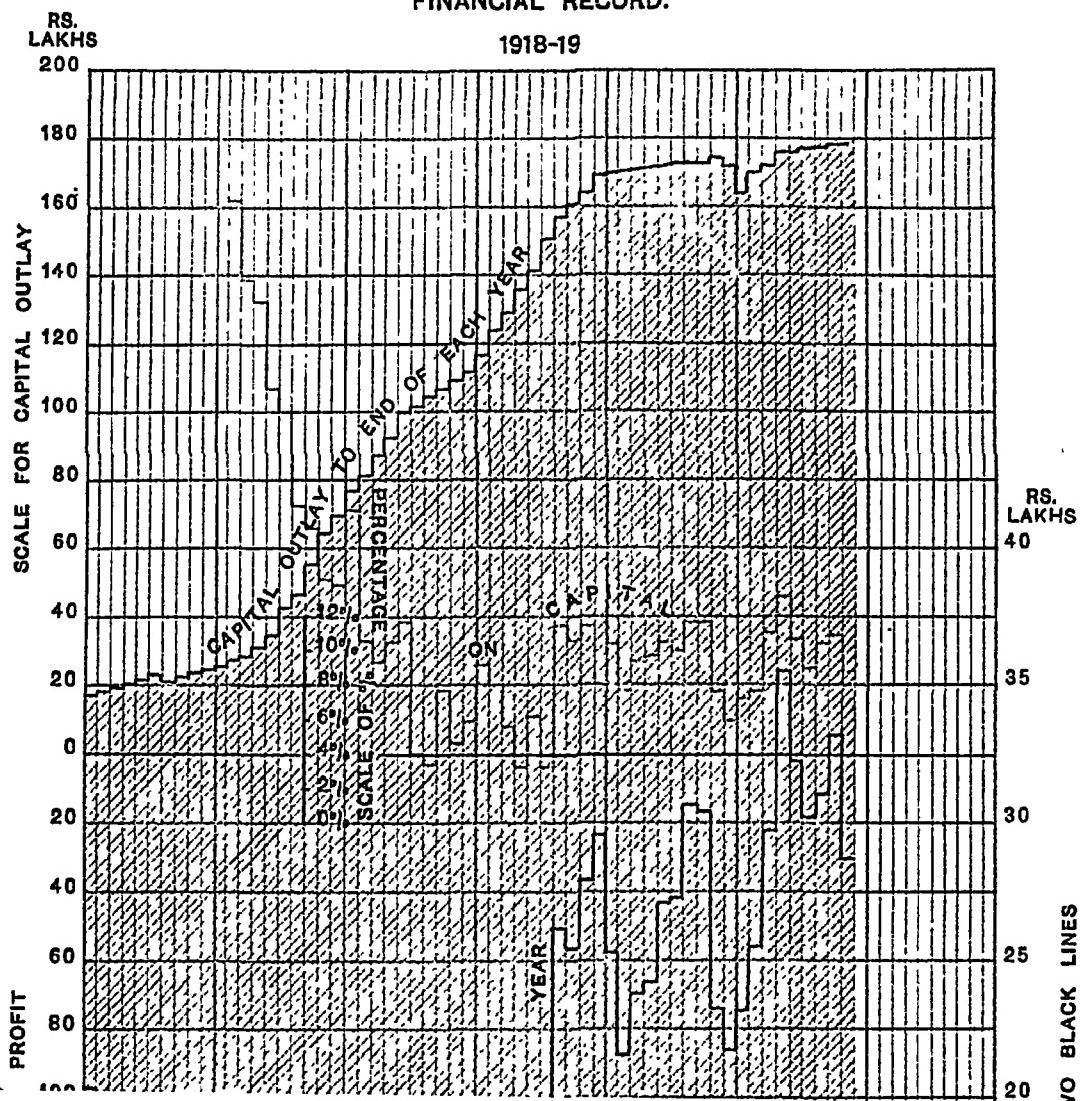
The areas shown include those done in Patiala State on Sirsa, Branch.

The discharges are as measured at canal head, and are averages utilised for the whole of each crop.

The duties are derived from the above areas and discharges.

WESTERN JUMNA CANAL.

FINANCIAL RECORD.



5.- The following table shows the irrigation effected during 1918-19 as compared with the averages of the previous triennial periods :—

Area irrigated—
Kharif, 1913.
Rabi, 1918-19.

CROP.	AVERAGE FOR THE 3 YEARS ENDING		AREA IRRIGATED DURING	
	1914-15.	1917-18.	1917-18.	1918-19.
	Acres.	Acres.	Acres.	Acres.
Kharif ...	... 400,628	360,763	373,102	349,172
Rabi ...	... 425,146	432,192	352,223	371,360
Total	... 825,774	792,955	725,325	720,532

The reduction in the area of irrigation in the *kharif* was due to the early failure of the cotton crop owing to its having been eaten up, as is usually the case in hot weather, by grass-hoppers, a calamity which disheartened the zamindars and disinclined them to sow other crops. Only a small area of fodder crops was put down, though fodder was badly wanted, the zamindars holding off in the hopes of rain.

The influenza epidemic during October and November and the early failure of the supply in the river were responsible for the poor *rabi* crop.

6. The receipts amounted to Rs. 66,117 and maintenance charges to Rs. 6,265, showing a nominal profit of Rs. 59,852 against Rs. 52,541 in 1917-18 and Rs. 68,229 in 1916-17.

No boats are now plying for hire on the canal, the only navigation being raft traffic from the hills and boats for carriage of Government material, and a few boats plying in connection with the Flour Mills on the Main Branch.

7. *Imperial*.—The gross revenue was Rs. 28,75,154 and the working expenses Rs. 13,41,447, giving a net revenue of Rs. 15,33,707 as compared with Rs. 17,79,926, the average of the previous triennium and Rs. 19,43,112 of the previous year. The decrease was due to the decrease in the area irrigated in both the crops under reference (*rabi* 1917-18 and *kharif* 1918) the former being due to the heavy rainfall in October 1917 which enabled the zamindars to put down larger *barani* area while the latter was attributable to the almost entire failure of the monsoon as mentioned above.

Contribution.—The net revenue received by the Patiala State on their channels on the Sirsa Branch amounted to Rs. 1,97,075 or 16.98 per cent. on the capital cost invested, against an average of Rs. 1,62,968, or 14.04 per cent., for the triennium ending 1917-18, and Rs. 2,20,460 or 19.00 per cent. of the previous year.

8. (a) *Agricultural and other conditions of the year*.—The canal remained in flow for 320 days and was closed at its head for 36 days (16 days in *kharif* and 20 days in *rabi*). The supply was equal to the demand during earlier part of the *kharif* but became insufficient towards the middle of September so that the *kharif* crops had to be matured and *rabi* crops sown on an insufficient supply. The cultivators gave the water to their *kharif*, hoping to sow *rabi* crops later, but owing to the influenza epidemic in October and November, which attacked 75 per cent. of the cultivators and caused the death of about 20 per cent. of them, the *rabi* crops could not then be sown fully, and by the beginning of December the supply of water was insufficient. Swarms of

the young crops during *kharif* as there was no grass
itton was the principal crop destroyed by them but
ably. Sugarcane also failed as the seed became
The whole of the area which was sown at the
ani wheat.

failure of the sugarcane crop the Principal of
was approached and was good enough to
vators as to what they should do to prevent

vine, which threatened early in the
very small area was put under fodder
middle of August, partly from fear
the crops during the long hot
gambled unsuccessfully on
fodder crop was so serious
trees and date-palms all
cattle and goats, and
from this cause.

granted remission in
The failure in
beneficial rainfall

Rs. 4,13,62,157

*Made on
and cross
planning*

(iii) Towards the end of the year a new division with headquarters at Dadupur was sanctioned for the control of the Headworks and Main Line. This Division was opened from 2nd April 1919 and should be of very great assistance by enabling the Executive Engineer, Karnal Division, to devote his attention to irrigation in the Karnal District. The irrigation in Karnal District on Sirsa Branch, formerly in the charge of the Executive Engineer, Hissar Division, will now be transferred to the Karnal Division, and this should have very beneficial results.

(iv) A new and much simplified system of dealing with the rafting traffic at Headworks was sanctioned by the Local Government and was brought into force during the rafting season of the year under review. The timber is made up into rafts of a standard size and the charge is made per raft instead of checking dimensions of each single piece of timber. The revised method has been most beneficial to all concerned.

(v) It has been decided to construct Government offices and residential quarters for the Executive Engineer at Rohtak as the accommodation otherwise available is not suitable.

IRRIGATION IN NATIVE STATES.

Irrigation in Patiala State.—The irrigation in Patiala State from the Sirsa Branch during the year was 36,152 acres in *kharif* and 25,017 acres in *rabi* or a total of 61,169 acres exclusive of 465 acres; half of this area was remitted in *kharif* and half in *rabi*. The average area assessed for the two last triennia ending 1917-18 and 1914-15 were 72,551 and 66,667 acres, respectively.

Irrigation in Jind State.—The supply which the Irrigation Branch has undertaken to allow the Jind State is 353 cusecs, intended to irrigate an area of 60,000 acres annually. The area actually irrigated was 56,400 acres. The reduction in the area was due to the same causes as had reduced the area in British Territory.

The average areas irrigated during the two previous triennia, ending 1914-15 and 1917-18, were 64,058 and 60,602 acres, respectively. Besides the area recorded above an average of about 1,000 acres of irrigation is done in the Jind State from the Bhiwani distributary which is assessed at the water rates prescribed for British areas on this canal.

Maintenance and assessments on all Jind State distributaries are controlled by State officials. The following table shows the working of the Jind State distributaries as reported by the State: —

Particulars.	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.
<i>Receipts.</i>					
Occupiers' Rates	... ... ...	2,68,098	2,62,054	2,68,054	2,04,010
Miscellaneous	... ... ...	5,088	6,978	6,800	4,015
Total	...	2,64,081	2,67,782	2,63,854	2,52,226
<i>Working expenses.</i>					
Establishment	... ... ...	7,817	7,807	10,491	11,3.0
Other expenses	... ... ...	29,365	31,776	21,676	14,894
Occupiers' rates paid into British Treasury	... 1,31,000	1,31,000	1,31,000	1,31,000	1,31,000
Total	...	1,67,182	1,70,173	1,63,167	1,62,234
Profit or loss	...	+1,26,809	+97,659	+1,00,187	+1,36,801
					+83,959

The above amount shows a profit of Rs. 83,959 against a profit of Rs. 1,36,801 in the previous year.

grass-hoppers ate up all the young crops during *kharif* as there was no grass for them to feed on. Cotton was the principal crop destroyed by them but *jowar* also suffered considerably. Sugarcane also failed as the seed became rotten owing to late sowing. The whole of the area which was sown at the proper time was put under *barani* wheat.

In consequence of the failure of the sugarcane crop the Principal of the Lyallpur Agricultural College was approached and was good enough to send an expert who advised the cultivators as to what they should do to prevent any further failure of this crop.

Notwithstanding the fodder famine, which threatened early in the crop and grew very acute later on, only a very small area was put under fodder crops and even this was not sown until the middle of August, partly from fear of the grass-hoppers, which were damaging the crops during the long hot and dry season and partly because the zamindars gambled unsuccessfully on the arrival of the monsoon. The failure of the fodder crop was so serious that the cultivators were driven to stripping *kikar* trees and date-palms all over the canal area in order to obtain food for their cattle and goats, and considerable damage resulted to the canal plantations from this cause.

Altogether nearly 27,000 acres of crops had to be granted remission in the *kharif* crop, or nearly 7.5 per cent. of the whole crop. The failure in the *rabi* crop was, however, exceedingly small owing to the beneficial rainfall received during the last two months of the crop.

The value of crops assessed to water rates amounted to Rs. 1,13,62,157 which shows that the canal is a very valuable asset to the country.

(b) *Nature and scope of new works contemplated and progress made on the preparation of new Projects.*—(i) Project for the proposed new level crossing at Dadupur was held in abeyance on account of impossibility of obtaining iron work at a reasonable rate owing to the war.

(ii) There are proposals under consideration for remodelling the Head-works at Tajawala but these were also held in abeyance for the reason given for (i) above.

(iii) A project has been worked out for the substitution of minors direct water-courses for irrigation near Tajawala, but it is held up for want of funds.

(iv) The work of re-designing the existing old channels on scientific principles and gradually remodelling them is being carried forward systematically funds permit.

(v) The opening up of the Indri Singhoa Cut in the Indri Escape diverted escapeage water which has hitherto blocked the drainage of logged lands above Indri was also held up owing to scarcity of funds several proposals had been formulated and approved.

The construction of a new rest-house at Kharak on Butana Branch, received the approval of the Local Government, was also postponed funds.

resting facts relating either internally or externally to the timber traffic at Jagadhri Railway Station has developed during the last two years and this is now one of the most markets in the Province and very extensive additional made by the Railway to cope with it. This timber is Main Line of the canal from the Jumna river to the

the very heavy and unexpected flood of October 1917 the mass of sleepers lying at the river sides for removal replaced till late in 1918, so that up till about February rough the canal was at a standstill; after that it was difficult to cope with it, and it endangered the canal

lity of obtaining coal has considerably interfered with the required for works on the canal.

(iii) Towards the end of the year a new division with headquarters at Dadupur was sanctioned for the control of the Headworks and Main Line. This Division was opened from 2nd April 1919 and should be of very great assistance by enabling the Executive Engineer, Karnal Division, to devote his attention to irrigation in the Karnal District. The irrigation in Karnal District on Sirsa Branch, formerly in the charge of the Executive Engineer, Hissar Division, will now be transferred to the Karnal Division, and this should have very beneficial results.

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Irrigation in Jind State.—The supply which the Irrigation Branch has undertaken to allow the Jind State is 353 cusecs, intended to irrigate an area of 60,000 acres annually. The area actually irrigated was 56,100 acres. The reduction in the area was due to the same causes as had reduced the area in British Territory.

The average areas irrigated during the two previous triennia, ending 1914-15 and 1917-18, were 64,058 and 60,602 acres, respectively. Besides the area recorded above an average of about 1,000 acres of irrigation is done in the Jind State from the Bhiwani distributary which is assessed at the water rates prescribed for British areas on this canal.

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Particulars.	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.
<i>Receipts.</i>					
Occupiers' Rates	2,88,098	2,62,054	2,58,054	2,04,610	2,49,548
Miscellaneous	5,088	5,978	5,900	4,015	2,738
Total ...	2,94,081	2,67,782	2,63,354	2,08,625	2,52,286
<i>Working expenses.</i>					
Establishment	7,817	7,397	10,401	11,3.0	12,014
Other expenses	28,366	31,776	21,076	14,804	25,283
Occupiers' rates paid into British Treasury ...	1,81,000	1,81,000	1,81,000	1,81,000	1,81,000
Total ...	1,07,182	1,70,173	1,03,167	1,03,234	1,68,327
Profit or loss ...	+1,26,899	+97,559	+1,00,187	+1,86,391	+83,039

The above amount shows a profit of Rs. 83,959 against a profit of Rs. 1,83,891 in the previous year.

Irrigation in Bikaner State.—The Western Jumna Canal is intended also to irrigate 460 acres annually in Bikaner State from the tail of Hissar distributary. The areas actually irrigated were 267 acres in *kharif* and 11 acres in *rabi* or a total of 278 acres. This area pays the ordinary occupier's rates and is assessed by the Canal Department. The deficiency in irrigation was due to the same causes as operated in British Territory.

Irrigation in Kalsia State.—The irrigation in Kalsia State from Main Line of the canal was 1,100 acres in *kharif* and 1,291 acres in *rabi* or a total of 2,391 acres exclusive of 39 acres remitted in *kharif* and 14 acres in *rabi*.

This area also pays the ordinary occupier's rates and is assessed by the Canal Department. The average area assessed for the last 3 years has been 766 acres in *kharif* and 757 acres in *rabi* or a total of 1,523 acres.

SIRHIND CANAL.

(SUPERINTENDING ENGINEER—MR. E. R. FOR.)

1. (a) *Imperial*.—The expenditure (direct and indirect) amounted to Rs. 64,048, but it was reduced to Rs. 57,474 by a credit of Rs. 6,574 on account of value of material obtained from dismantling the Lock gates of the Sutlej Navigation Channels. The heavy ex-

Capital Account—
Kharif, 1918.
Rabi, 1918-19.

penditure of Rs. 54,643 under the suspense account was necessary to create a reserve of stone at Rupar, to manufacture bricks and to bring on stock the above material of the Locks. The remaining expenditure was incurred on constructing the new Kohira and Kanganwal distributaries for the Maler Kotla State and new servants' quarters for Superintending Engineer's quarters at Ambala and on converting a foot bridge into a cart bridge at mile 73, Bhatinda Branch.

(b) *Contribution*.—The expenditure of Rs. 1,179 represented the share borne by the Signatory States, of the expenditure incurred on the Headworks and Main Line.

2. (a) *Imperial*.—The expenditure amounted to Rs. 81,160 as compared with Rs. 70,432 in the previous year and was spent chiefly on improving distributaries by raising and widening sunken bridges; remodelling distributary head regulators and on other petty works such as raising mill shoots, improving minor buildings and rebuilding the notches of a fall at mile 76, Bhatinda Branch.

(b) *Contribution*.—A sum of Rs. 75,960 was spent, of which Rs. 70,635 represented seigniorage charges and the remainder was a small amount partly representing the share of the expenditure on the Headworks and Main Line and partly the expenditure which was incurred on minor improvements to buildings and on building gauge wells.

3. (a) *Imperial*.—The expenditure was only Rs. 4,41,820 as compared with Rs. 5,31,468 in the preceding year. This appreciable drop was due to the satisfactory condition of the torrent works on which so much had been done in the last few years. Beyond the ordinary annual repairs, expenditure was also incurred under special estimates in putting patrol roads, canal and distributary banks into good order; on some special protection at the junction of the Sugh and Budki Torrents; and in bringing irrigating channels into efficient working order.

(b) *Contribution*.—The expenditure of Rs. 1,30,99 against Rs. 2,28,437 in the previous year was incurred on the maintenance of the Native States' Branches and in the share of expenditure on the Headworks and Main Line. Here too the decrease results from smaller expenditure in the Rupar Division on repairs to torrent works.

4. The *kharif* season was remarkable for the almost total failure of the monsoon, the rainfall being generally less than half the normal. After the rain in April, which was over normal, practically no rain fell except in the third week of August. The figures by districts were—

Nature of the season, state of demand and supply—
Kharif, 1918.
Rabi, 1918-19.

District.	Rainfall April to September.	Normal, April to September.
Ludhiana	7.96	16.31
Ferozepore	4.80	11.84
Native States	9.80	15.54

This dry monsoon hit the cultivators hard because—as always happens in a year following one of good rainfall (such as 1917-18 was)—the people took no interest in early *kharif* sowings partly by reason of their being busy in harvesting the large *rabi* crop of 1917-18, and partly because having had a good harvest they trusted to luck to get another—consequently canal-irrigated sowings up to the end of June were abnormally low, but the demand for water became intense in July and continued so through August and September. The final *kharif* area was good although the poor monsoon had adversely affected the supply in the river. Rotational turns began a month earlier than usual, and there being no grass for cattle, water had to be used to mature the large *kharif* area for fodder. *Rabi* sowings were consequently backward and were further delayed by the terrible influenza epidemic, which laid low the whole countryside, and such water as was available in late October and early November could not be used by the people to the best advantage. The subsequent winter rains were timely and slightly over normal over most of the tracts served by the canal. Considering the adverse conditions at sowing time, and that there were no *barani* areas to pick up later, the area irrigated during *rabi* was satisfactory.

The canal was closed only 12 days in the whole year, of which 10 days were in the early months for lack of demand and 2 days after the rainfall of August. The canal ran throughout the *rabi*.

Rainfall.—The following table compares the mean rainfall of the year by seasons and districts over the irrigated tract with the average mean of 35 years :—

District.	Crop.	RAINFALL.		Percentage of actual to average of 35 years.
		1918-19.	Average of 35 years.	
Ludhiana	<i>Kharif</i> , 1918	7.96	16.31	
	<i>Rabi</i> , 1918-19	4.25	3.95	
Total	...	12.21	20.26	60%
Ferozepore	<i>Kharif</i> , 1918	4.80	11.84	
	<i>Rabi</i> , 1918-19	3.33	2.29	
Total	...	8.13	14.13	58%
Native States	<i>Kharif</i> , 1918	9.80	15.54	
	<i>Rabi</i> , 1918-19	2.68	3.20	
Total	...	12.48	18.74	67%

5. The following table compares the irrigation effected in each crop with the two previous triennia and with the figures of 1917-18:-
 Area irrigated—
Kharif, 1918.
Rabi, 1918-19.

CROP.	AVERAGE OF THE 3 YEARS ENDING		AREA IRRIGATED DURING	
	1914-15.	1917-18.	1917-18.	1918-19.
	Acres.	Acres.	Acres.	Acres.
BRITISH BRANCHES.				
<i>Kharif</i>	387,894	277,962	207,435	308,510
<i>Rabi</i>	550,678	512,229	341,299	531,365
Total	893,812	790,191	551,734	887,875
NATIVE STATES' BRANCHES.				
<i>Kharif</i>	185,650	196,205	168,368	218,910
<i>Rabi</i>	293,026	301,837	211,792	318,616
Total	478,676	498,042	380,160	537,526
BRITISH AND NATIVE STATES' BRANCHES.				
<i>Kharif</i>	522,195	474,167	375,803	526,420
<i>Rabi</i>	840,604	814,066	556,091	899,681
Total	1,372,497	1,288,233	931,894	1,425,401

From the above statement it will be seen that with regard to irrigation the year under review was a very favourable one as compared with 1917-18 and the two previous triennia. It appears desirable to remark here that the weather conditions were abnormal in 1917-18 when the rainfall was more than double the normal while the area irrigated was less than $\frac{2}{3}$ ds the normal average. It will, therefore, be rather misleading to compare the figures of the year under review with those of 1917-18 and of the average of the triennial period ending 1917-18; the latter was also upset by the abnormal conditions of the former. However, for the whole canal the area irrigated was practically the same as in 1916-17 when the area irrigated was 1,425,740 acres, which has only been exceeded three times. During *kharif* sowings were retarded for the reasons explained in paragraph 4 *supra* and yet the area was the third highest on record the highest being in 1914-15 when 555,203 acres were irrigated, followed by 544,774 acres in 1916-17. The reason for the increase was the failure of the rains early in September 1918 whereby a large *burani* area was brought under canal irrigation.

British Branches.—In the *kharif* season the area was slightly below the average of the triennium ending 1914-15 for the reason already given, i.e., of neglect of sowings early in the year. The *rabi* area of 531,365 acres was up to the average having only been exceeded four times, and the total for the two crops was satisfactory.

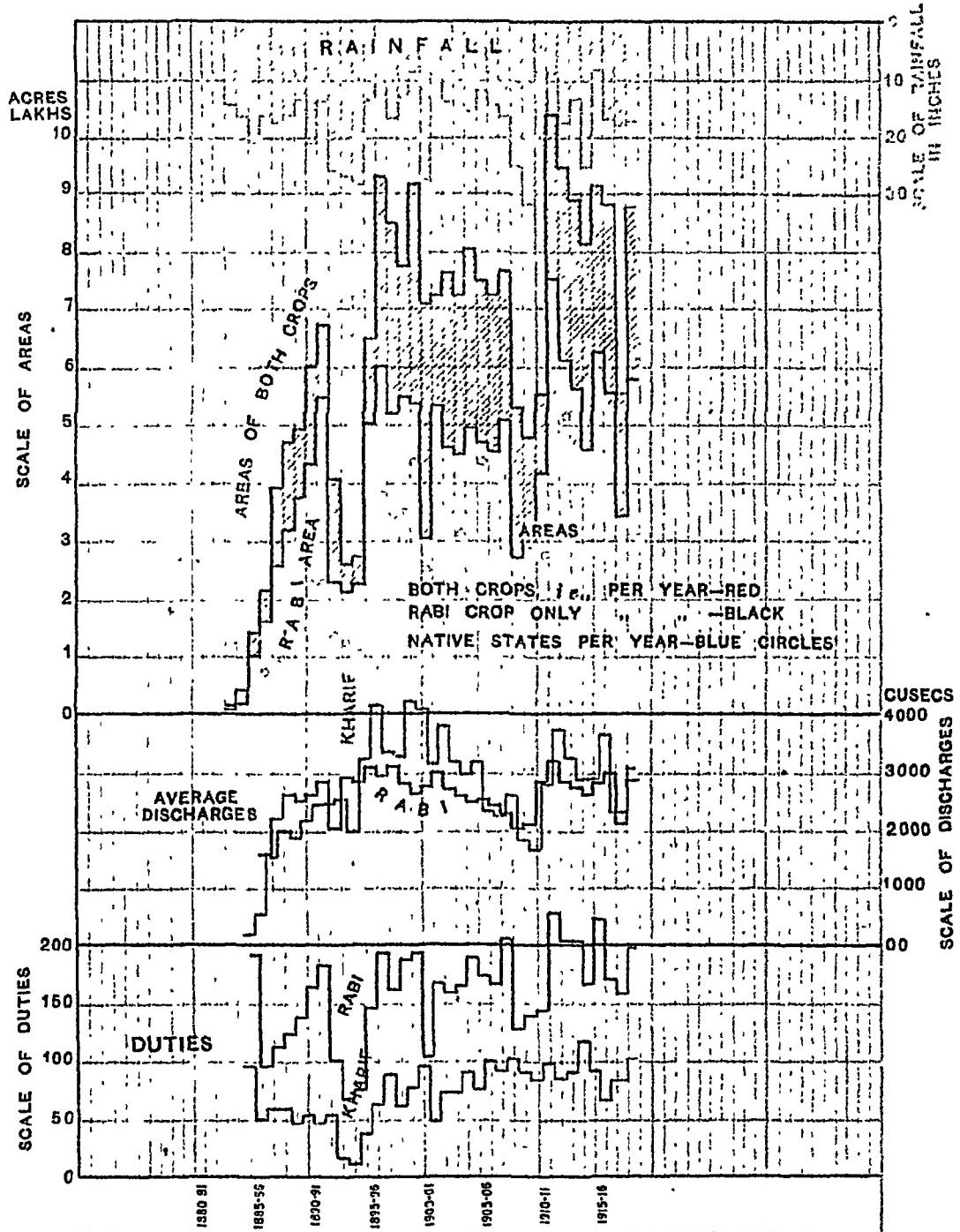
Native States' Branches.—Did the best *kharif* on record but fell off somewhat in the *rabi*.

The Native States are entitled to 36 per cent. of the whole irrigation but they have actually done 37.71 per cent. during the year.

SIRHIND CANAL—BRITISH.

WORKING RECORD.

1918-19.



N. B.—The intercepts in the red area give the Kharif acreage each year.

The small areas of 1892 to 1896 were partly due to silt difficulties, but chiefly to heavy rain. The working is more or less unsteady always.

The discharges are measured in main line 26 miles from the head. Of the whole supply 36% goes to Native States, not included here; so that the discharges here shown are only 64% of the actual flow.

These States ought therefore to do areas equal to $\frac{3}{4}$ ths of those shown above. The actual areas done for both crops are shown for comparison by blue circle, and it will be seen that owing to less efficient management they have done less than half the British, instead of $\frac{36}{64}$ ths. In winter the whole river is taken in; in Kharif the supply is more than enough, but the demand is then always low.

considering that an expensive storage reservoir costing Rs. 3,93,74,490 has

Navigation.

6. The details of traffic in tonnage and receipts are shown in the following table :—

Particulars.		1917-18.	1918-19.
Tonnage carried	...	29,918	34,290
Value of tonnage	...	11,17,813	13,45,084
Toll receipts and raft dues	...	16,905	17,892
Maintenance charges	...	7,553	3,900
Number of passengers carried	...	16,359	30,198

The large increase in the number of passengers carried was due to there being no long closures this year.

7. (a) *British Branches*.—The net revenue after deducting working expenses amounted to Rs. 16,85,848, giving a return of Rs. 6·56 per cent. on the capital cost. The corresponding figures for the previous year were Rs. 21,80,527 and 8·51 respectively. The decrease in the percentage was due to—

- (a) the poor rabi area in 1917-18 collections for which were made in 1918-19;
- (b) an uncollected balance of Rs. 1,52,022 for which the Native States were responsible.

If the latter had been paid into British Treasuries in time, the return for the year would have been Rs. 7·15 per cent. Even this figure would be the lowest for seven years past.

The working expenses were Rs. 11,81,868 or Rs. 72,623 less than in the preceding year, working out to Rs. 1·33 per acre irrigated against Rs. 2·27 the highest on record in the previous year.

(b) *Native States' Branches*.—The following table compares the figures for the present and previous years in collections, assessments, areas assessed and profits :—

YEAR.	AMOUNT OF REVENUE.		Area assessed.	PROFIT ON		
	By collection.	By assessment.		Collection.	Assess-ment.	
				Rs.	Rs.	
1917-18	22,81,944	17,15,625	379,080	9·20	5·88	
1918-19	19,76,107	24,07,552	536,338	8·38	12·02	
More or less	—2,85,837	+7,82,027	+1,57,258	—0·82	+6·61	

8. (a) *Projects*.—(i) *The Sutlej Dam Project otherwise known as the Bhakra Dam Project*.—The designing and estimating of the whole scheme was finished and the Project Division closed on 31st March 1919. The complete Project is now under the consideration of Government. The total cost, direct and indirect, and including interest at 5 per cent. during construction is estimated to be 1474 lakhs and it is anticipated the scheme will pay 7 per cent. which is satisfactory considering that an expensive storage reservoir costing Rs. 3,93,74,490 has

to be made before water becomes available for irrigation purposes. The area of new irrigation expected annually will be 2,120,432 acres.

Discharge observations were continued at Bhakra for the Sutlej. A new recording station was started at Pang on the Beas in a situation similar to that at Bhakra. It is most fortunate that this was done in 1918-19 as we now have, for the lowest river supply on record, actual observed daily discharges, from which an accurate discharge curve has been plotted. We are now in a position to state with confidence the carrying capacity of the Beas under the worst conditions, occurring probably about one year in fifty, and can show that in the months of August when all spare Sutlej water will be utilized for filling the reservoir there will be enough water in the Beas for all the canals of the Sutlej Valley series without material assistance from the Sutlej.

(ii) A project for a *kharif* distributary from mile 31, left of the Sutlej Navigation Channel, to irrigate near Ferozepore, was under preparation, and the estimate was approaching completion. It is proposed to use the surplus water passed down the Sutlej Navigation Channel, which ordinarily runs to waste, to work some mills.

(iii) Work on the Project for the Rohira and Kanganwal distributaries referred to last year was approaching completion. The Kanganwal will irrigate in the *kharif* of the current year (1919).

(b) *Areas of principal crops on British Branches.—Sugarcane.*—Area assessed 6,479 acres against 3,516 in the previous year. The fodder famine of 1918 resulted in the sale of fields of standing sugarcane at Rs. 250 per acre, as fodder, a remarkable source of profit to the owners, who received a record price without the trouble of harvesting or extracting sugar.

Cotton.—Area assessed 16,740 acres against 14,898 in the preceding year. American cotton was introduced on a small scale, an innovation which has borne fruit in 1919, in which an enormously increased area has been put under the crop.

Wheat.—Area assessed was 261,873 against 197,267 in 1917-18 (an abnormally low year) and 257,582 in 1916-17, a good average year.

(c) The agricultural conditions were favourable for irrigation operations but bad for areas unprotected by canals. As already stated the rainfall in the monsoon months was from 1-3rd to half the normal. The rabi rainfall was timely and good and reduced remissions to a very low figure. The total area on which remissions were granted on the British Branches was 5,434 acres against 10,539 and 10,242 in the two previous years.

Influenza in epidemic form ravaged the whole tract served by the Sirhind Canal. It was at its worst for only a fortnight but the after-effects were felt for weeks, while the enormous fatalities sadly reduced the capacity of the people for utilizing the facilities for irrigation.

UPPER BARI DOAB CANAL.

(SUPERINTENDING ENGINEER—MR. F. T. BATES.)

1. The expenditure (direct and indirect) on works excluding

Capital Account— <i>Kharif, 1918.</i>	Suspense amounted to Rs. 10,640 against Rs. 29,450 in the previous year and was in-
<i>Rabi, 1918-19.</i>	curred on constructing quarters for European

Upper Subordinates at Amritsar and for Zilladars, Munshis and peons at Jhelum.

The Suspense account showed a debit balance of Rs. 5,53,23 as compared with a credit balance of Rs. 35,760 in the previous year.

2. Expenditure amounted to Rs. 90,768 against Rs. 69,860 in the previous year, and was incurred chiefly on improving the Kashmir canal, the Daftu road bridge on the Main Branch Lower, the Lashkari-Nangal, Baggoh and Majitha-Hudiara drains and the Khaira distributary.

3. Expenditure amounted to Rs. 4,92,824 against Rs. 5,02,573 in 1917-18 and was incurred on ordinary annual maintenance and repairs. The following :—River works, canal headworks, canal and feeders, pitching the side slopes of the Main Branch Lower, right bank, and repairs to the Hudiara Drain.

4. The total value of manufactures amounted to Rs. 6,25,006 as against Rs. 3,46,094 in the previous year. The increase was partly due to the higher cost of materials. The percentage charges realized on the value of work done amounted to Rs. 1,69,915 against Rs. 1,26,474 of the previous year. The profit resulting from stock transactions, selling at market rate as against purchases before the war, amounted to Rs. 2,87,975 which was credited to revenue. In addition to works of minor importance, a work of some magnitude was undertaken in the remodelling of the iron work of the Rasul Regulator and undersluices of the Lower Jhelum Canal. The former is being fitted with radial arm gates of a new type designed at the Workshops, while the latter are being fitted with a modified form of Stoney sluice gate. A considerable amount of work was also done for other Departments, more particularly for the Munitions Board and Military Works. For the former a large quantity of transport wagon details, such as tail boards, dust caps, pipe boxes, etc., were manufactured, together with Railway requirements such as dog-spikes, platelayers' spanners, etc.; while for the latter several sets of tube wells were manufactured, a large quantity of trainway plant, engines, armoured cars and motor cars repaired and sets of pankah pulling mechanism supplied. For the Buildings and Roads Branch; several tube wells were made and several engines repaired.

In addition to the above, requisitions for tube wells from the Mayo Hospital, Lahore; Patiala, Kapurthala and Bahawalpur States; from several Railways, including the North-Western Railway, the East Indian Railway, the Eastern Bengal Railway and the Nushki Extension; several Municipalities; and from Baluchistan were met during the year.

Other Provinces also sought help in various ways. The North-West Frontier Province got a number of sets of distributary gates and gearing; Bengal and Bombay asked for preliminary designs and estimates for the Damodar river works and Sukkar Barrage, respectively, which were prepared and supplied; and the Mysore State asked for a design for gates for a high dam which also was worked out and supplied.

Area irrigated—
Kharif, 1918.
Rabi, 1918-19.

5. The following table compares the area irrigated during the year with the average of the two previous triennia and with the figures of 1917-18 :—

CRORE.	AVERAGE OF 3 YEARS ENDING		AREA IRRIGATED DURING	
	1914-15.		1917-18.	
	Acres.	Acres.	Acres.	Acres.
Kharif	550,379	588,340	555,771	524,888
Rabi	611,568	625,344	588,750	540,161
Total	1,161,947	1,188,684	1,144,521	1,065,049

The deficiency in irrigation during 1918-19 was due chiefly to the failure of the rains in 1918 resulting in the restriction of *wadhi* irrigation and to the river remaining very low throughout the year.

Nature of season and state of demand
and supply—
Kharif 1918.
Rabi, 1918-19.

6. The mean rainfall is compared with the average of the previous 3 years in the following table.—

DISTRICT.	1918-19.		AVERAGE OF PREVIOUS 3 YEARS ENDING 1917-18	
	<i>Kharif.</i>	<i>Rabi.</i>	<i>Kharif.</i>	<i>Rabi.</i>
			Inches.	Inches.
Gurdaspur	14.75	7.15
Amritsar	7.27	5.11
Lahore	7.40	3.42
			29.17	22.88
			4.97	4.05
			19.32	2.24

The monsoon of 1918 was an extremely weak one. There was light rain during April but no rain during May and only light showers during June and July.

Real monsoon conditions did not set in until the middle of August, and ended as early as the 1st week in September.

During the monsoon months, May to September, the total rainfall at Madhopur was only 20.2 inches against an average for the past 15 years of 40 inches.

There was little or no rain during October and November and only light rainfall in December. In January there was good rain.

The river Ravi was abnormally low during the monsoon. There were only 3 occasions on which the Mukesar gauge registered over 10 feet and the maximum flood reading was 12.4 feet on the 26th August 1918 as against 21 feet during 1917.

7. The net income (direct and indirect) amounted to Rs. 37,84,114

Financial results based on collections—
Rabi, 1917-18.
Kharif 1918 equivalent to 16.89 per cent. on the capital invested compared with 16.52 per cent. of the previous year.

The uncollected balance of occupiers' rate was Rs. 43,256 against Rs 36,969 at the end of the previous year. Remissions of water rate amounted to Rs. 41,237 compared with Rs. 3,04,973 of last year.

The area for which remissions were granted was 20,534 acres compared with 67,237 acres in 1917-18 and was due largely to the damage caused by insects owing to insufficiency of moisture.

8. (a) *Duty*.—The average duty secured on the supply utilized was 96 acres in *kharif* and 205 acres in *rabi* as against 132 acres and 267 acres, respectively, of the previous year.

General remarks. The canal was closed from 31st January 1919 to 15th February 1919, when all falls were unwatered and repaired where necessary.

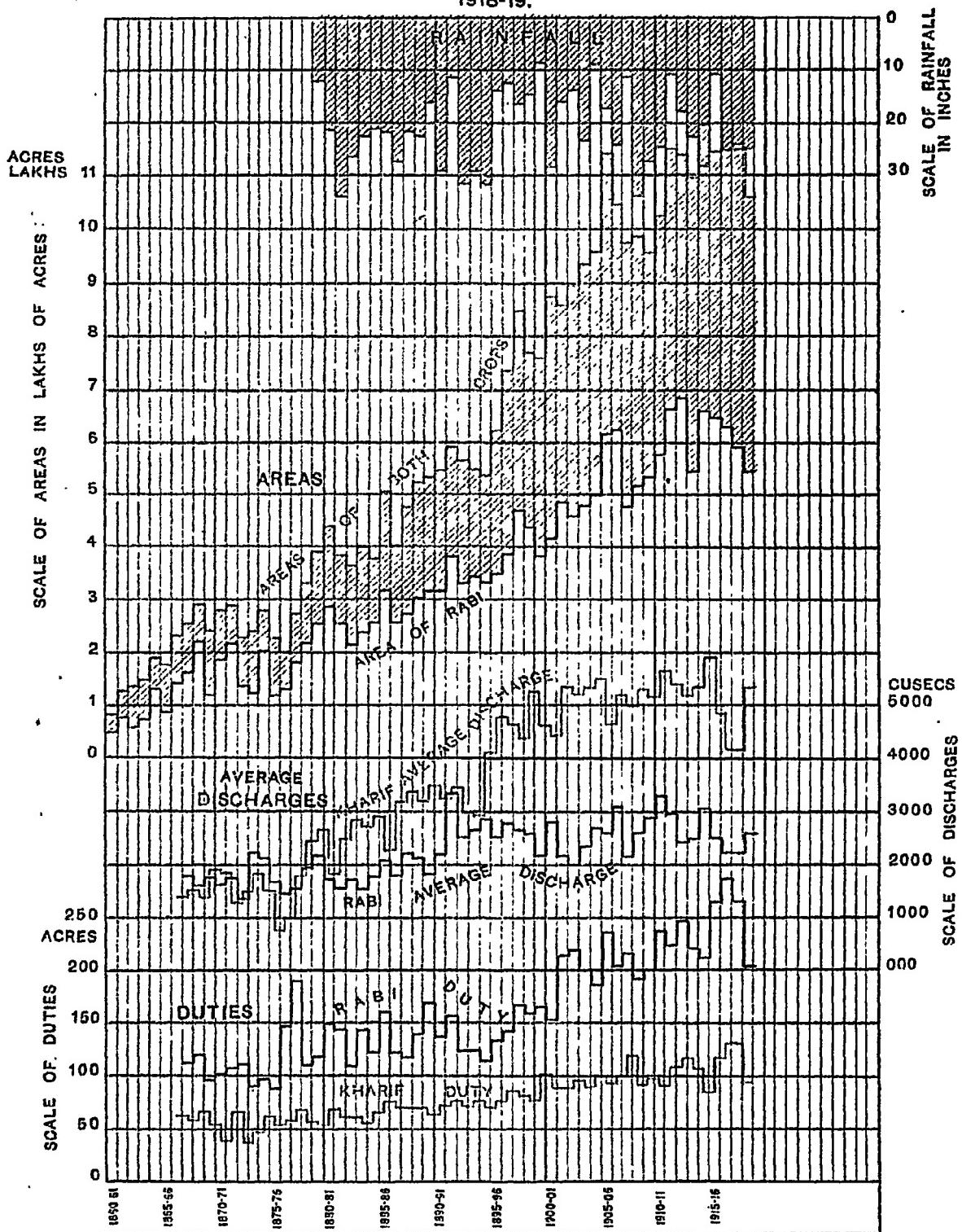
In addition there were minor closures for a few hours each which were made during floods in the river to prevent shingle and timber entering the canal.

(b) *Principal crops*.—The areas of the principal crops grown during the year are compared in the following table with those grown in the previous year :—

Name of crop.	1917-18.		1918-19.	
	'Acres.	'Acres.	'Acres.	'Acres.
Wheat	208,416	226,970		
Barley	7,181	8,044		
Rice	70,054	66,204		
Maize	49,214	68,872		
Millets	104,914	121,666		
Cotton	184,189	137,084		
Sugarcane	48,154	561,679		

UPPER BARI DOAB CANAL:
WORKING RECORD.

1918-19.



N. B.—The intercepts in the red area show the Kharif acreage each year.

The discharges are measured at canal head and are averages for each crop.

The duties are derived from these areas and discharges.

Remarks.—The Kharif duty is fairly uniform and increasing slowly.

The Rabi duty is more irregular, due to variation in demand, but is increasing recently.

The Rabi supply decreased fairly steadily from 1891-92 to 1902-03, but nevertheless the areas increased owing to higher duty.

The Kharif supply has increased since 1894 very considerably, owing to the capacity of the canal being enlarged.

Usually the whole of the river winter supply is taken in for the Rabi crop, but after March and up to September the river supply is in excess of requirements.

Area under wheat is about 10 per cent. more than that of previous year.

(c) *Agricultural conditions.*—The year was unfavourable for agriculture. Owing to the failure of the monsoon there was very little *barani* area sown during the *kharif* and owing to early cessation of the monsoon in September and lack of rain during November and December the area sown *barani* and *wadh* irrigation during the *rabi* was also small.

The canal was below indent from 11th September to 25th March 1919

(d) *New works contemplated*—(i) It is probable that deeper tube wells will have to be put down in connection with the Hydro-Electric subsoil pumping scheme in Amritsar as a result of the failure of the monsoon rainfall of 1918. The supply obtained from the existing wells has fallen off to an extent totally unexpected.

(ii) *Radial Arm Gates, Madhopur Inlet.*—An estimate has been prepared for fitting the remaining bays of the Inlet with Radial Arm Gates.

(iii) *Pitching Main Branch Upper.*—Proposals have been under consideration for extensive pitching with boulders of the Main Branch Upper to prevent bank erosion.

LOWER BARI DOAB CANAL.

(SUPERINTENDING ENGINEER—MR. R. CANNELL.)

1. The total expenditure (direct and indirect) amounted to Rs. 1,84,649,

Capital account.
Kharif, 1918.
Rabi, 1918-19. bringing the total outlay to date to Rs. 2,26,46,199. The expenditure was incurred principally on the following works :—

New Divisional staff quarters at Balloki and Khanewal ; rest-houses at Chugatta and Akil (Tulamba distributary) ; subordinates' quarters in the Montgomery and Khanewal Divisions ; Patwarkhanas ; Tulamba distributary with its minors ; Chak Shahana distributary ; and water-courses (cost recoverable from settlers) on the Kalasan, Ganji Bar, and Tulamba distributaries, for incoming colonists ; and culverts on the water-courses of the Chichawatni distributary.

More money could not be spent with advantage as labour was scarce and wages and rates high. Extensions of Government channels and construction of water-courses kept pace with colonization.

On water-courses Rs. 98,230 were spent, bringing the total expenditure to date to Rs. 13,28,692. The recoveries effected from the zamindars amounted to Rs. 1,37,143, but this was the first year of recoveries under the new procedure, and it does not represent the average annual recovery estimated as necessary to extinguish the debt in the course of a certain period.

Contribution works.—The following works were carried out through the agency of the Canal Department :—

- (a) Irrigation channels and other works connected therewith were constructed for Rai Bahadur Ganga Ram, C.I.E., M.V.O., the lessee of the Renala and Khokhar lift Irrigation Schemes, and for Major D. Vaurenen, the lessee of the Renala estate, costing Rs. 1,26,268 and Rs. 9,682 respectively.
- (b) A well was constructed at a cost of Rs. 1,508 for the 32nd Lancers' Horse breeding Farm, Blairpur, near Montgomery.
- (c) Chichawatni Mandi bridges and metalling ramps, costing Rs. 8,405.
- (d) An 8 feet diameter brickwork well was built for the 36th Cavalry in village 26 of the Jahanian distributary.
- (e) A plantation minor was also constructed for the Forest Department from R. D. 8,900 of 3-L Minor, Forest distributary.

The total expenditure, amounting to Rs. 1,03,897, covered the building of drains at the new canal station at Balloki, write Extensions and Improvements. back of "capital" expenditure on buildings to "Revenue" in those cases in which new buildings were sanctioned to replace those which were of a temporary nature; instituting new plantations and avenues;

alterations and extensions of irrigation channels ; constructing boundary road culverts ; and improvement of drainages ; as also the tail outlet clusters of distributaries and other small masonry works for improving the distribution of water.

3. The expenditure of Rs. 4,56,034 was incurred on ordinary maintenance of Headworks, Flood Embankments, Main Line distributaries, buildings and plantations, and special repairs to and remodelling of the Balloki discharge flume, and building artificial berms to hold the rising supplies in the Main Line and in some of the distributaries.

Nature of season and state of demand and supply—
Kharif, 1918.
Rabi, 1918-19.

4. The canal was in flow for 305 days (166 days during *kharif* and 139 days during *rabi*) against 323 days in the previous year.

The demand for canal water was keen throughout the year, rainfall being scanty, especially during the *kharif* and the first half of the *rabi* seasons.

Owing to shortage of water in the rivers, and to the deficiency of the monsoon rainfall a great deal of water was applied to watering the cotton crop which would otherwise have been utilized for sowings of the following *rabi* crop : but, in spite of this, the latter showed an increase over the previous year. During the first half of the *rabi* season practically no rain fell and the river supplies were low, but timely rainfall in January saved the situation, which would otherwise have been critical.

The supply rose to 5,131 cusecs for a short period against a designed capacity of 6,750 cusecs at canal head.

The actual average rainfall is compared below with that of the previous year :—

	1918-19.	1917-18.
	Inches.	Inches.
Lahore District	... ... 8.66	38.86
Montgomery District	... ... 4.48	30.06
Multan District	... ... 4.64	18.76

Area irrigated—
Kharif, 1918.
Rabi, 1918-19.

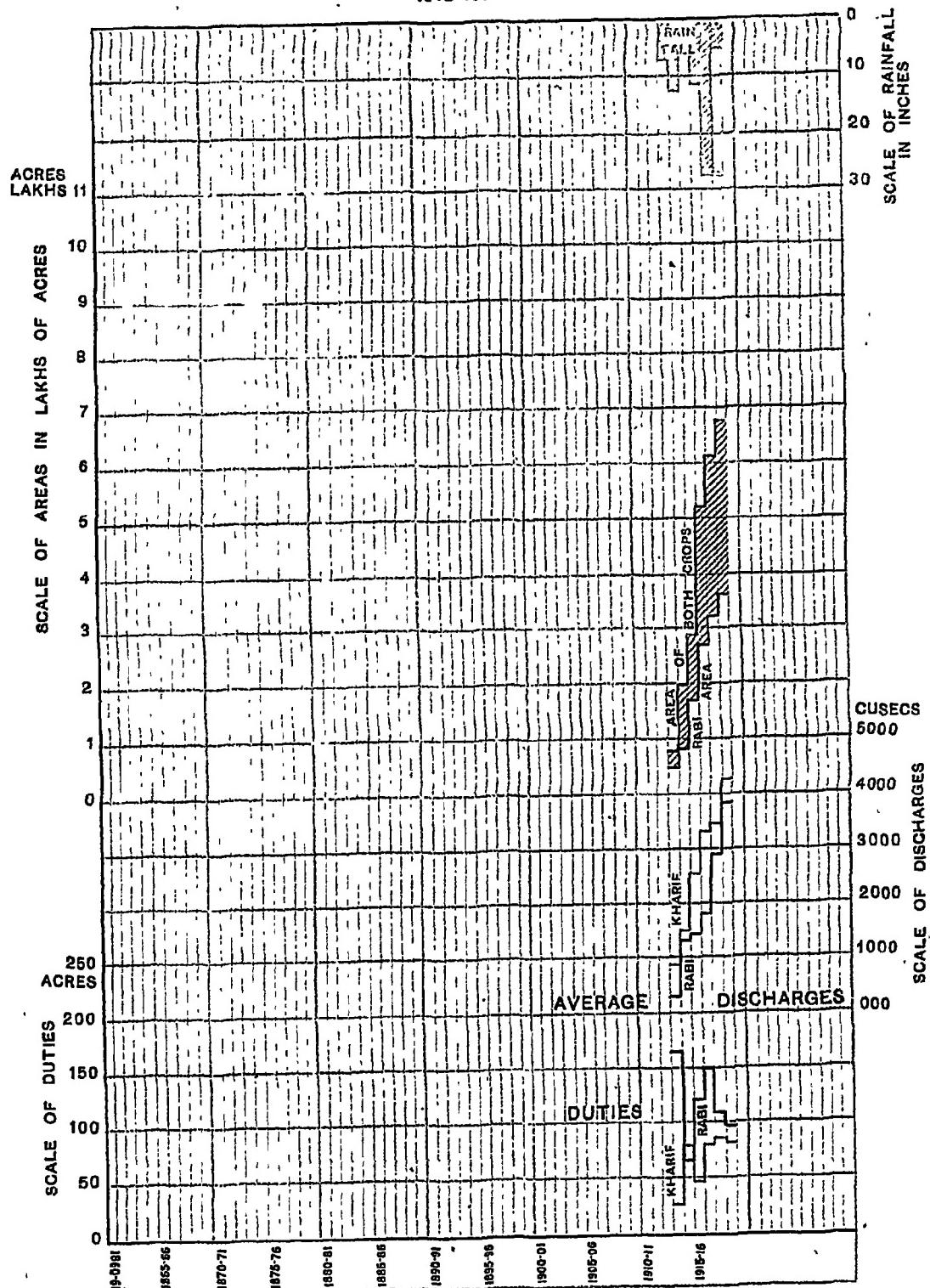
5. The following table compares the areas irrigated each year since the commencement of irrigation on this canal, with the area forecast for each year in the Project Estimate :—

YEAR.	ACTUAL.			As estimated in the Project Estimate (annual).
	<i>Kharif.</i>	<i>Rabi.</i>	Total.	
1913-14	19,996	53,582	73,578	...
1914-15	106,302	82,902	189,204	250,000
1915-16	114,974	168,820	283,294	450,000
1916-17	248,448	266,493	514,936	650,000
1917-18	296,526	325,074	621,600	871,308
1918-19	325,593	352,411	678,004	871,308

LOWER BARI DOAB CANAL.

WORKING RECORD

1918-19.



N.B.—The intercepts in the red area show the Kharif acreage each year.

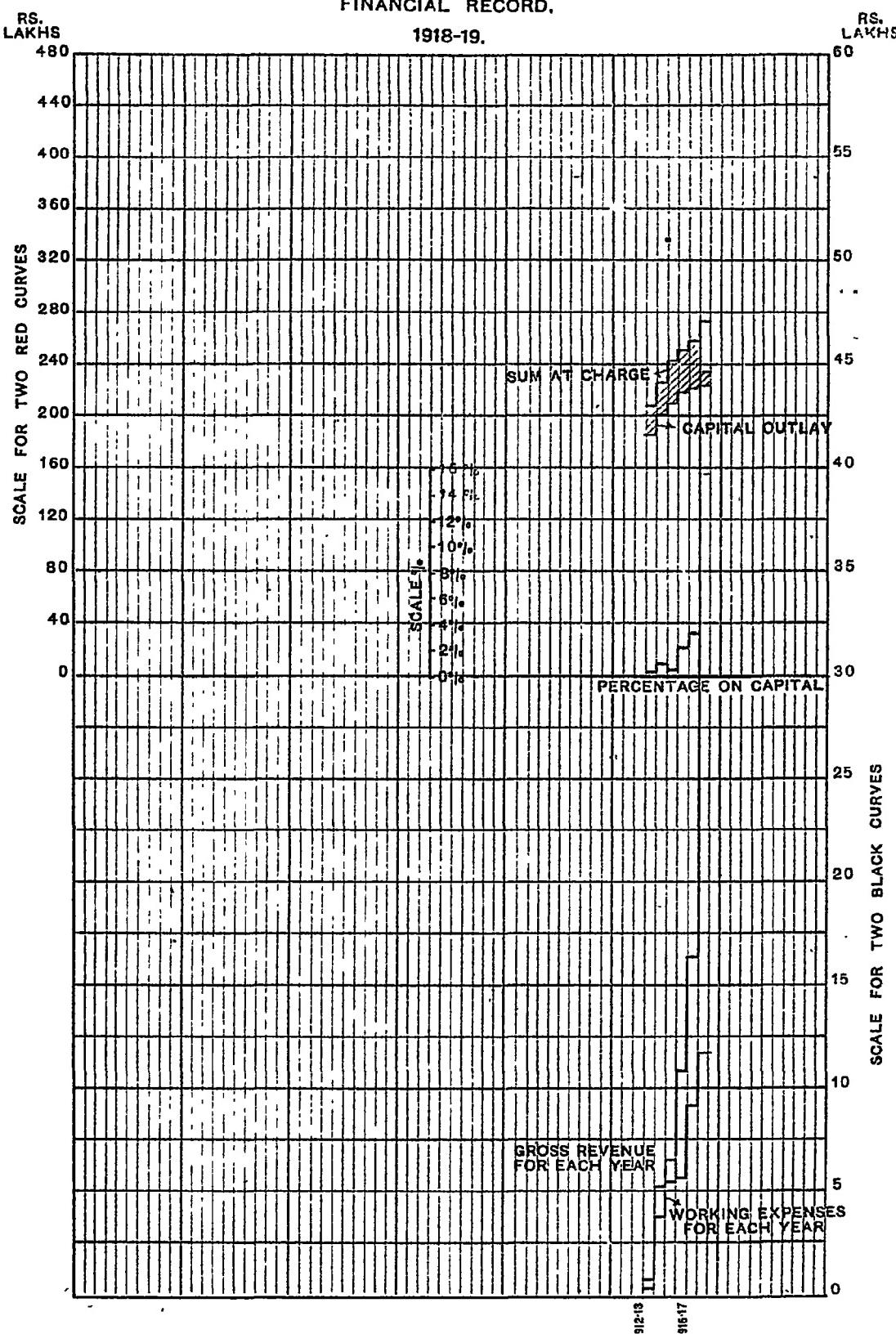
The discharges are measured at canal head and are averages for each crop.

The duties are derived from these areas and discharges.

LOWER BARI DOAB CANAL.

FINANCIAL RECORD,

1918-19.



*N. B.—*The intercepts in the red area show arrears of interest unpaid up to end of each year, which being added to the capital give sum at charge.

The intercepts between the black curves give the net income each year.
Construction commenced in 1907 and the canal was opened in 1913.

This canal being one of the triple project canals its financial record, considered alone, is largely fictitious. The financial record of the triple canal project as a whole is shown on a separate diagram facing page 26.

Detail of irrigation in 1918-19, for old and new villages separately in each Division, is given below :—

Division.	Old.	New.	Total 1918-19.
	Acre.	Acre.	Acre.
Balloki	42,005	64,938	107,028
Okara	21,707	208,773	230,480
Montgomery	11,841	197,213	209,054
Khanewal	13,703	117,641	131,442
Total	89,441	588,563	678,004

The progress of canal irrigation, as remarked in the report for 1917-18, is a year behind that of the Project Estimate, owing chiefly to the Upper Jhelum Canal having been opened a year later than had been anticipated, and also to the backwardness of colonization. A very hopeful feature is the popularity of the *kharif* crop resulting from the high prices ruling for cotton. The canal, as remarked by the Cotton Commission, promises to be a first class *kharif* canal and this feature is likely to reduce the demand for the scanty water supply available in the winter months. The development of irrigation has been retarded by the fact that in consequence of the recommendations of a Conference of Civil and Canal Officers at Lahore in 1911 the distributaries of this canal were constructed to an aggregate capacity only four-fifths of that to which they should have been designed, so that they could not dispose of the full supply which the canal itself had been designed to carry. This mistake is now being rectified by enlargements of the capacities of the distributaries.

6. The gross receipts amounted to Rs. 46,93,839, the working expenses to Rs. 11,71,904, and the net revenue to Rs. 35,21,935. The receipts were about 28 lakhs more than those of the previous year, the increase being due to—

- (a) the increase of about 2 lakhs acres in the area assessed during *rabi*, 1917-18 and *kharif*, 1918, revenue for which was realized during the year under report;
- (b) the increase of about Rs. 97,000 under miscellaneous receipts from water power, etc.;
- (c) the increase of about Rs. 22,61,800 realized from sales of waste lands on which the canal received a credit at 4 per cent. per annum of Rs. 90,452 more than last year;
- (d) the credit of Rs. 17,10,221, on account of the land revenue and malikana in the Montgomery District for this year and the six years previous to it, which has only been given during the year under review.

In the previous year the net revenue gave a return of 5·3 per cent. on the capital invested but this year the return has gone up to 16·3 per cent.

7. (a) *Duty.*—The duties on areas irrigated per acre of average supply measured at canal head and at distributary heads, respectively, compare as follows with those of the previous year :—

YEAR.	KHARIF DUTY		RABI DUTY	
	At canal head less escapage.	At distributary head (average).	At canal head less escapage.	At distributary head (average).
1917-18 ..	87	107	105	136
1918-19 ..	71	87	94	115

The low duties were due to the temporary nature of allotments over about 50 per cent. of the area so far distributed. Temporary cultivators do not use water economically. The supply has not been restricted as it is considered sound to supply water abundantly to colonists who, in addition to the many other difficulties attendant on the opening of a new colony, are faced with the task of reclaiming inferior soils which require to be worked up to a good tilth before they can grow crops successfully.

(b) *Remissions.*—The area remitted amounted to 131,817 acres (66,109 acres in *kharif* and 65,708 acres in *rabi*) mainly due to—

- (i) free crop under tenancy rules and not for crop failure, and
- (ii) failures of crops.

The remissions under (i). above amounted to 56,249 acres (19,814 acres in *kharif* and 36,435 acres in *rabi*) and require no explanation.

As to (ii) above the chief causes of remissions were short supply in certain "chaks," bad germination or cultivation, bad soil and late sowing, etc. The principal crops affected were rice, cotton, sugarcane, maize, *jowar* and *chari* in the *kharif* season and wheat, barley, gram, *toria* and *senji* in the *rabi* season.

(c) *Progress of colonization.*—The following table gives the total culturable crown waste (allotable) area on the canal and the area allotted permanently and temporarily at the beginning and end of the year:—

Total culturable Crown waste area allotable as per Mr. Joseph's classification.	Area allotted to end of 31st March 1918, permanent and temporary.	AREA ALLOTTED TO END OF 1918-19.		
		Permanent.	Temporary.	Total.
Acres.	Acres.	Acres.	Acres.	Acres.
1,016,972	817,662	480,790	453,273	934,063

Great assistance to the working of channels was afforded by the large increase in temporary allotments, permanent allotments being not adequate.

In view of the enormous increase in the profits and value of land since 1914 a differential scale of "Malikana" has been sanctioned for temporary cultivation varying from Rs. 2 to Rs. 16 per matured acre, at the discretion of the Colonization Officer, according to the quality of the land.

The market value of the land is rising, the highest price paid in March 1919 at an auction being Rs. 1,018 per acre.

(d) The increase in area under American cotton was substantial, and with the improved supplies of the current *kharif* a still more marked increase may be confidently anticipated. During *kharif* 1919 areas of 235,000 acres of American and 24,500 acres of "desi" cotton have been booked, and the former exceeds by 57 per cent. the future average annual area of 150,000 acres estimated at page 22 of the Report of the Indian Cotton Committee.

(e) The working of the canal, generally, proved satisfactory and the Colony staff gave every possible assistance by allotting unoccupied areas. As the Main Line of the canal will soon be running with its full capacity, every acre of culturable land, good, bad and indifferent, requires to be occupied. The barren aspect of inferior soils yields to good cultivation and to an abundant supply of the fertilizing flood water of the river Ravi. The principal working feature of the year was the running of increased supplies in the Main Line and the forcing up of supplies in all distributaries with a view to their being able to carry the supply represented by the full capacity of the canal. There have, on the whole, been very few complaints of unsatisfactory water supply, but a few villages at the tails of channels were poorly supplied, in comparison with villages lying nearer the sources of supply, these shortages being due to defects in "command" and to breaches of banks where berms had not formed.

UPPER CHENAB CANAL.

(SUPERINTENDING ENGINEER—MR. A. R. MURRAY.)

1. The expenditure (direct and indirect) amounted to Rs. 1,33,860, but

Capital Account—
Kharif, 1918.
Rabi, 1918-19.

the recovery of Rs. 58,499 effected from the cultivators on account of the cost of water-courses, and a credit of Rs. 77,214 under Suspense (Rs. 62,416 for stock issues to works and

Rs. 14,79 for stock sales), as well as receipts of Rs. 4,192, on Capital Account, reduced it to a credit balance of Rs. 6,089. This brought the total outlay to the end of the year to Rs. 3,57,69,507 as against Rs. 3,57,75,806 to end of 1917-18. No large works were carried out. Expenditure was incurred mainly on construction of quarters for establishment, distributary channels of the Nokhar Branch, and minor masonry works, of which two foot bridges on the Main Line Lower were the most important.

2. The expenditure amounted to Rs. 30,660 against Rs. 11,325 in the preceding year. No works calling for special extensions and improvements mention were carried out.

3. The expenditure amounted to Rs. 6,23,964 against Rs. 5,43,107 in the previous year. Repairs to the floor, downstream of the undersluices at Merala, were effected at a cost of Rs. 40,000, and a considerable quantity of work was done in improving the condition of canal and distributary banks. The soil of which the banks are composed is a stiff sour clay impregnated with salts, and the margin of width provided for natural berm formation in the canal is generally insufficient. Steps were taken to induce berm formation where such had not already taken place, and efforts were made to staunch banks by means of silt from berms already formed. A good deal of work was also done in the way of consolidating and grading banks.

Nature of seasons and state of demand and supply—
Kharif, 1918.
Rabi, 1918-19.

4. The kharif season was not a favourable one owing to deficient rainfall, more especially at the time when rice was sown.

In the rabi season timely rainfall, during the maturing period, benefited both irrigated and unirrigated crops substantially.

At Gujranwala 8.83 inches of rainfall were recorded during kharif, and 3.92 inches during rabi, as compared with averages of 22.93 inches and 3.97 inches for the last three years.

Demand for canal water was generally keen throughout the year. The canal was in flow for 109 days during kharif and 138 days during rabi. Rotational working of the linked canals was enforced from the 1st October.

Area irrigated—
Kharif, 1918.
Rabi, 1918-19.

5. The following table compares the areas irrigated during the year with preceding years and with the project forecast:—

YEAR.	ACTUAL.			Project forecast.
	Kharif.	Rabi.	Total.	
	Acres.	Acres.	Acres.	Acres.
1914-15	121,189	90,693	211,882	350,000
1915-16	159,152	165,910	325,002	500,000
1916-17	285,917	151,500	437,477	648,367
1917-18	246,110	187,825	382,935	648,367
1918-19	204,694	222,170	426,864	648,367

Of the total area irrigated 399,005 acres were in the old proprietary villages and 27,859 acres in Colony villages.

The *rabi* figures showed an appreciable improvement over those of previous years, but the *kharif* figures were disappointing. The poor results during *kharif* were attributable partly to deficient rainfall and partly to the fact that the *kharif* Full Supply Factor, on which the capacities of the distributary channels have been based, had been wrongly calculated in the Project Report for the class of crop grown.

Delay in the construction of watercourse systems, pending final settlement of the complicated question of canal irrigation of well areas in certain zones, also militated against development of irrigation.

6. The gross revenue (direct and indirect) amounted to Rs. 19,87,335,

Financial results based on collections—

Rabi, 1917-18.

Kharif, 1918.

the working expenses to Rs. 12,80,996, and the net revenue to Rs. 7,06,339, or 1.97 per cent. on the capital outlay.

As remarked in last year's administration report the Upper Chenab Canal is, in great measure, a feeder channel for the Lower *rabi* Doab Canal, so that, as a commercial proposition, it cannot be altogether judged by its own financial results.

7. During the course of the year the Merala Timber Depôt was

General remarks.

brought to completion and collection of timber

was started on a small scale. The Canal Railway

line between Merala and Sambrial has not, however yet been taken over by the North-Western Railway.

The Aik Nallah was surveyed with a view to preparation of a report on flood restriction and utilization of the waters of the Aik.

The year was a comparatively dry one and consequently no increase in oversaturation of the lands adjoining the main canal was noticeable. The important question of drainage of these lands engaged attention, and a scheme for clearing the channels of the Palkhu Nallah system and constructing seepage drains along the main canal was prepared.

During the autumn the influenza epidemic almost paralyzed operations. As an instance of its severity it may be mentioned that, for a time, during November, practically the whole of the regulating establishment at the Headworks was placed *hors de combat*, and the Military authorities at Sialkot had to be asked for assistance, which they kindly rendered in the shape of a detachment of Sappers and Miners.

There was marked scarcity of labour during the winter season, for which the influenza epidemic was probably largely to blame, and labour rates showed a marked upward tendency.

LOWER CHENAB CANAL.

(*SUPERINTENDING ENGINEER—MR. J. W. B. LOUGHREAN.*)

1. The expenditure (direct and indirect) amounted to Rs. 7,581, but

Capital Account—

Kharif, 1918.

Rabi, 1918-19.

as the canal received a credit of Rs. 29,936 on account of stock transactions under the Suspense

account the net expenditure showed a credit

balance of Rs. 22,355. This reduced the total outlay from Rs. 3,25,18,571 at end of 1917-18 to Rs. 3,24,96,216 to end of the year under review. The small expenditure was incurred mainly on constructing Patwarkhanas and fixing Kennedy Gauge Outlets, and the credit balance resulted from reduction of stock and tools and plant, the former by issue to maintenance and repairs and Taccavil works, and the latter mainly by sale to the Army Department and Munitions Board for Mesopotamia and elsewhere.

2. The expenditure amounted to Rs. 1,80,337 and was spent on

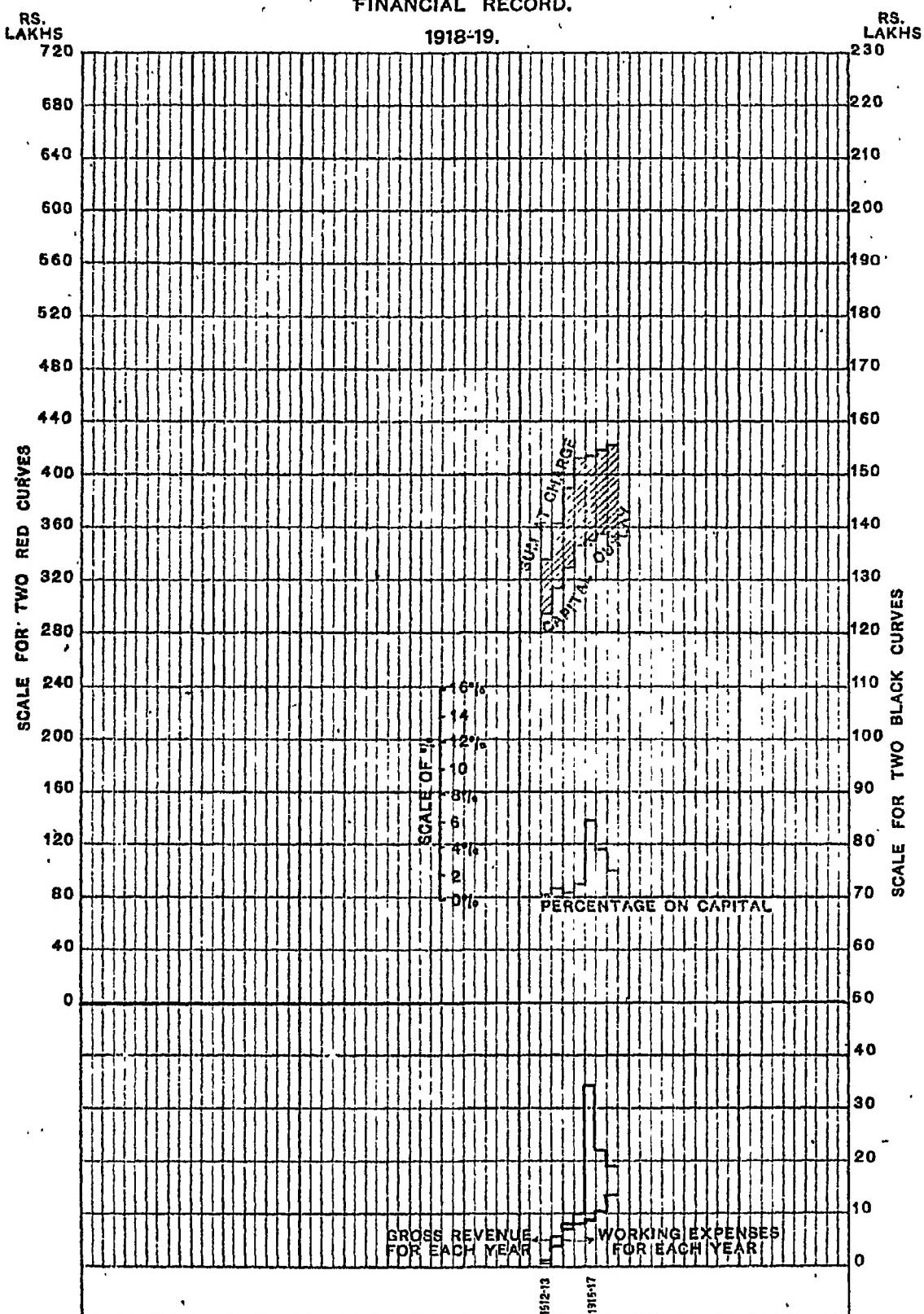
Extensions and Improvements.

a large number of small works. The bulk of it, however, was incurred on improving the drains in

UPPER CHENAB CANAL.

FINANCIAL RECORD.

1918-19.



N. B.—The intercepts in the red area show arrears of interest which, added to the capital, give the sum at charge.

The intercepts between the black curves give the net income each year.

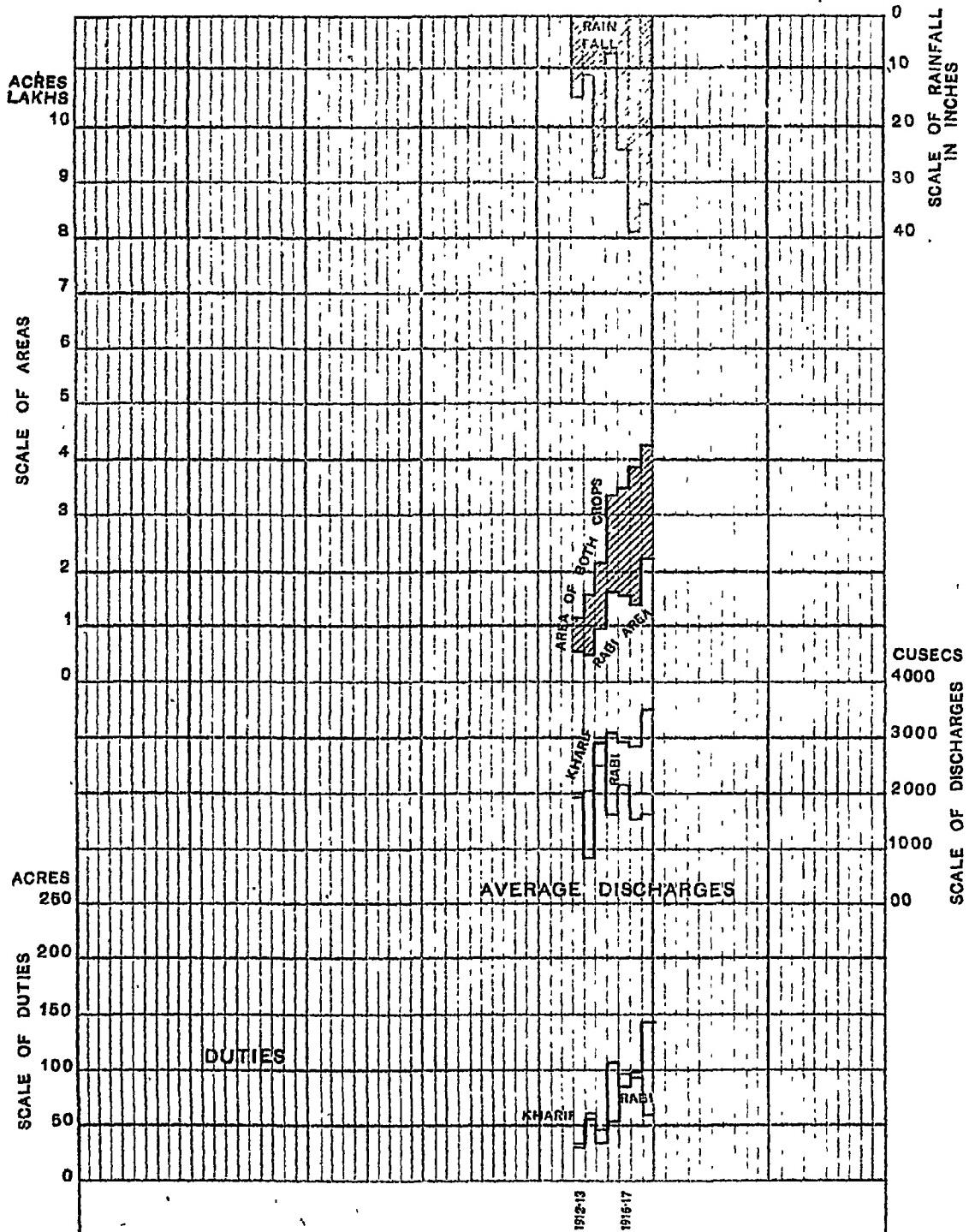
Construction commenced in 1905 and the canal was opened in 1912.

This canal being one of the triple project canals its financial record, considered alone, is largely fictitious. The financial record of the triple canal project as a whole is shown on a separate diagram facing page 26.

UPPER CHENAB CANAL.

WORKING RECORD,

1918-19.



N. B.—The intercepts in red area give the Kharif irrigation each year. The discharge are measured at Merala the head of canal and give averages for each crop.
The duties are derived from these areas and discharges.

the Hafizabad tract, and in improving the distribution of water from the irrigating channels of the canal. Round about Hafizabad the country, during the year under report, was drier than usual, the area water-logged being small. This was partly due to the poor monsoon and partly to the influence of the surface drains that have been constructed by this Department. Rainfall appears to play an important part in the water-logging of this tract.

3. Expenditure amounted to Rs. 8,67,233, a normal figure, and was incurred on the annual maintenance of channels, masonry works, buildings and on repairing Bays Nos. 4, 5 and 6 of weir at Khanki, and shanks of Spurs G, H and E, renewal of Railway track at Sangla; and strengthening and widening banks of branches and distributaries.

4. (a) The *kharif* season was a dry one. The demand for canal water was, in consequence, very keen and the defects in the distributing systems were brought into prominence. On channels provided with Kennedy Gauge Outlets there were few complaints and defects were easily adjusted, but on channels not so provided the distribution was inequitable and on some channels *tatils* of outlets had to be enforced. The *rabi* rainfall was poor but very beneficial to the standing crops. The river supplies during the *rabi* season were, on the whole, satisfactory, though not abundant.

The canal ran for 171 days in *kharif* and 175 days in *rabi* and was closed at the head for 12 days in *kharif* and 7 days in *rabi*.

There were very few floods in the river Chenab at Khanki during the year, and they were of moderate volume. The largest flood occurred on 5th and 6th April 1918 and amounted to 169,000 cusecs.

(b) Rainfall.—The following table compares the rainfall of the year under review with that of the previous three years:—

Crop.	Lyallpur District.	Jhang District.	Gujranwala District.	REMARKS.
	Inches.	Inches.	Inches.	
<i>Kharif</i> , 1918	4.62	5.91	8.01	
<i>Rabi</i> , 1918-19	2.05	2.08	3.07	
Total for year	6.67	7.99	11.08	
1917-18	24.10	25.13	29.57	
1916-17	12.44	9.62	21.01	
1915-16	2.28	2.92	5.15	

5. The following table compares the irrigation with the averages of the two previous triennia and with the figures of 1917-18:—

CROP.	AVERAGE OF THE 3 YEARS ENDING		AREA IRRIGATED DURING	
	1914-15.	1917-18.	1917-18.	1918-19.
	Ares.	Acres.	Ares.	Acres.
<i>Kharif</i>	724,862	608,231	727,281	795,545
<i>Rabi</i>	1,541,143	1,584,413	1,540,844	1,543,653
Total	2,266,005	2,282,644	2,277,125	2,339,198

Of the area irrigated 419,186 acres were in old villages and 1,920,012 in Colony villages.

The figures for the year, as well as for the *kharif* crop, were the largest ever recorded. The slight decreases in the *rabi* figures as compared with the figures of 1917-18 and the preceding triennium was attributable to the following causes :—

- (a) Deficiency of rainfall during sowing time.
- (b) The rotational closures being commenced during the critical period of wheat sowing.
- (c) The Influenza epidemic, which was severe, and which prevented Zamindars from preparing their fields and sowing to the same extent as usual.

The *kharif* duty worked out to 84 acres and the *rabi* duty to 211 acres as compared with 95 acres and 197 acres in the previous year.

Remissions.—In the *kharif* season 6,353 acres were remitted and in the *rabi* 3,987 acres, or a total for the year of 10,340 acres against 11,910 acres in 1917-18. These remissions included 396 for *kharif* and 14 acres for *rabi* under Tenancy rules. Owing to the dryness of the *kharif* season insects were more active than usual and the bulk of the remissions for that crop was due to them. In the *rabi* season bad germination accounted for 1,407 acres.

6. The net revenue amounted to Rs. 1,42,49,271, giving a return Financial results based on collections—
Kharif, 1918. of 43·85 per cent. on the capital outlay of
Rabi, 1917-18. Rs. 3,24,96,216 to the end of the year.

	Rs.
Capital outlay	... 3,25,18,571
Net Revenue	... 1,28,02,664
Percentage on Capital	... 39·87 per cent.

This favourable result was mainly due to—

- (a) the record area irrigated during *kharif* 1918;
- (b) a deduction of Rs. 8,34,000 made in 1917-18 for cost of Civil Administration in the Lyallpur District which the Civil Department omitted to make during the two years previous to it and which, in consequence, affected the figures of 1917-18, whereas no such deduction was made during the year under report ;
- (c) a greater area of higher rated crops having been matured during the *rabi* crop of 1917-18 and *kharif* 1918.

The accumulated net profits after defraying interest charges have increased from Rs. 13,88,42,183 to Rs. 15,19,86,744 against a capital of Rs. 3,24,96,216 invested at end of the year.

7. The operations of the year were limited by the need for severe economy on account of the War. Only those works were carried out that could not be delayed. The cost of materials was high and labour scarce and expensive.

Alternative estimates were prepared for raising the weir at Khanki to various levels. The object of this is to ensure better control and command of the river at Khanki for regulation and other purposes. At certain stages of the river supply command of the river is almost entirely lost and this leads to heavy shoaling in undesirable places in the river bed and silt troubles in the canal.

An estimate was also prepared for replacing the out-of-date gates and gearing of the undersluices by modern appliances, to reduce the time and labour now spent on working them. This is an important and urgent work now as the present system of regulation requires the undersluices to be used more frequently than in the past.

The next urgent necessity is the alteration of the regulator cills. At present the river cill does not reach the level to which it should rise to meet present regulation needs and, in consequence, when the river levels are high some of the gates of the regulator have to be closed down entirely. This causes swirls in the canal and the concentration of the canal supply through a part of the regulator must cause silt to enter the canal. The needs of different seasons are conflicting. The *kharif* requires a high cill while the *rabi* requires a low one.

UPPER JHELUM CANAL.

(SUPERINTENDING ENGINEER—MR. N. WHITE.)

1. The expenditure (direct and indirect) was more than balanced by realizations on account of sale of Tools and Capital Account—
Kharif, 1918 Plant rendered available by the completion of
Rabi, 1918-19. all important works. The capital account, therefore, showed a credit balance of Rs. 37,840 which reduced the total outlay to the end of the year to Rs. 4,49,93,973. The principal works carried out were :—Constructing beldars quarters at Mangla, and inspection house, bridges, minor channels, water-courses and culverts on the Gujrat Branch; seepage drains along the Main Canal to reduce water-logging; and excavating a cut below the Shadiwal weir to improve the outfall of the Bhimber torrent.
2. The expenditure amounted to Rs. 30,667 and was incurred mainly on constructing drains to protect the Canal cut Extensions and Improvements. at Mangla and fixing sluice valves in the Main Canal syphons to scour the syphon barrels after floods.
3. The expenditure of Rs. 2,78,322 was incurred mainly on ordinary maintenance and repairs; no heavy damage occurred and the expenditure was, therefore, only about two-thirds of the previous year.
Maintenance and Repairs.

- Nature of seasons and state of demand and supply—
Kharif, 1918.
Rabi, 1918-19.
4. The following table compares the rainfall registered during the year with the average of past years:—

STATION.	RAINFALL.			Average of past years.	REMARKS.
	<i>Kharif, 1918.</i>	<i>Rabi, 1918-19.</i>	Total.		
Mangla	Inches. 19.0	Inches. 5.8	Inches. 25.4	Inches. 31.8	For 8 years.
Chillianwala	14.1	3.2	17.4	19.6	For 2 years.
Wasu	11.7	4.0	15.7	18.0	Ditto.
Busal	10.0	4.5	14.5	14.1	Ditto.
Bhachar	6.8	5.3	12.1	20.5	Ditto.
Pauranwala	12.3	4.4	16.7	18.0	Ditto.
Karoriwala	13.0	5.1	19.0	15.0	Ditto.

In the irrigated tract the rainfall was poor especially in the *kharif* season and in the early part of the *rabi* season.

The demand throughout the *kharif* was fairly steady and the supply was sufficient except at the beginning of the *rabi* season when the Jhelum river was unusually low.

Area irrigated—
Kharif, 1918
Rabi, 1918-19.

5. The areas irrigated and assessed compare as follows:—

DIVISION,	1917-18.			1918-19.		
	Kharif.	Rabi.	Total.	Kharif.	Rabi.	Total.
<i>Area irrigated.</i>						
Gujrat	...	15,920	18,184	34,104	16,281	31,932
Phalia	...	51,232	91,614	142,902	78,581	119,815
Total	...	67,208	109,798	177,006	94,862	151,747
	...					246,609
<i>Area assessed.</i>						
Gujrat	...	15,573	17,851	33,424	15,502	31,494
Phalia	...	50,317	89,314	139,631	75,810	119,265
Total	...	65,890	107,165	173,055	91,312	150,759
	...					242,071

The results show a 40 per cent. increase on the previous year's figures, but still considerably less than was anticipated in the Project, viz., 3,45,000 acres. This was due to an unavoidable delay of a year in opening the Canal, the epidemic of influenza that impeded cultivation and the development of new irrigation, and recruiting activities that made a heavy call on the available labour.

The Colony villages are now almost completely brought into cultivation and irrigating to the full extent proposed.

6. The gross income from all sources amounted to Rs. 8,00,505 and the financial results based on collections—
Rabi, 1917-18
Kharif, 1918.
working expenses to Rs. 7,37,645 resulting in a profit of Rs. 62,860 or 0·14 per cent. on the capital invested. Last year there was a slight loss but the cost of and expenditure on this Canal is largely in the interests of the other two Canals (Lower Bari Doab Canal and Upper Chenab Canal).

7. The gradual raising of the supply in the Main Line, an operation General remarks. that necessitates great care and incessant supervision, on account of the numerous high embankments, was carried on successfully during the year, and all ordinary demands for water supply can now be safely met.

There were no large floods in any of the numerous cross drainage works.

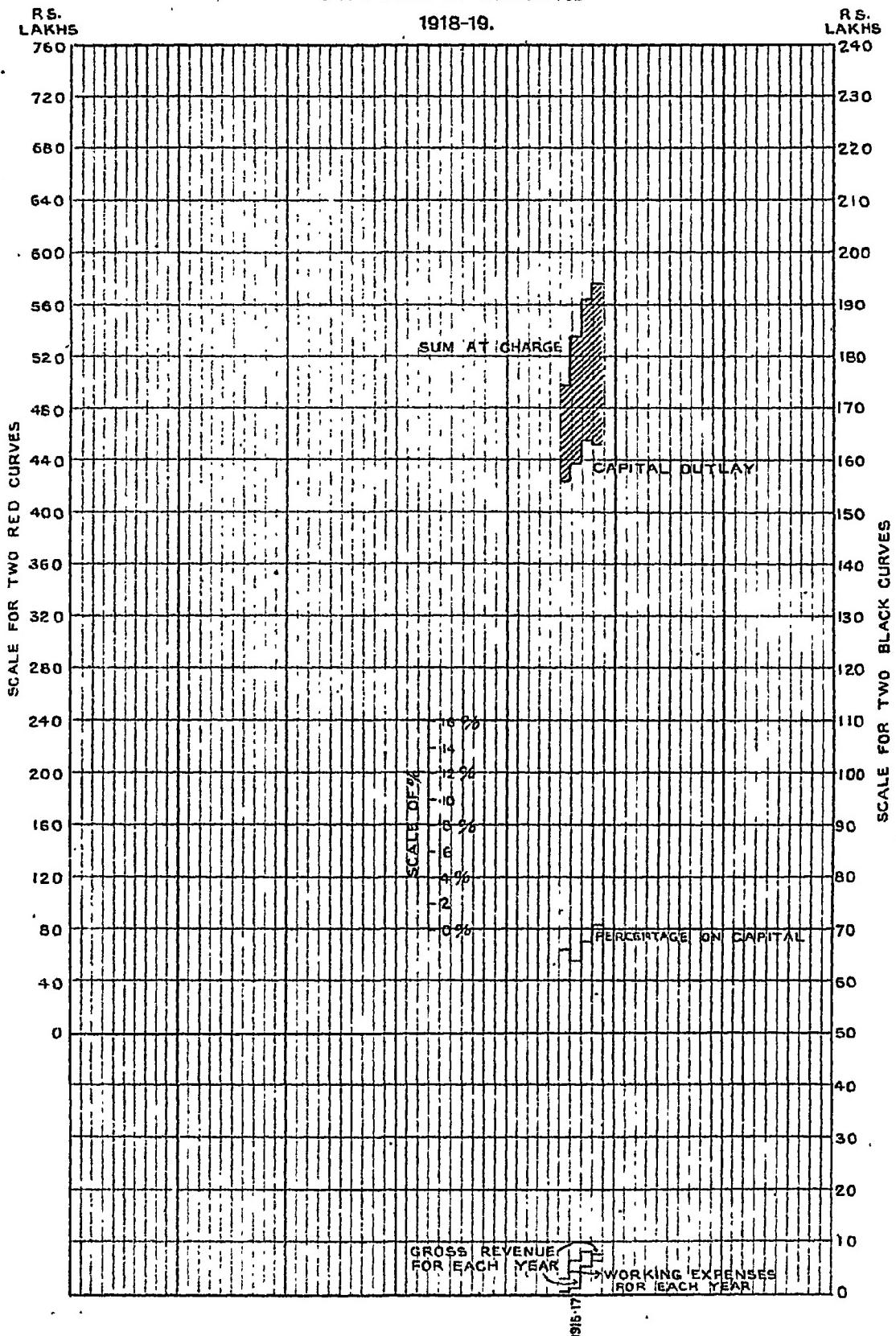
The Mangla Division was amalgamated with the Jhelum Division during the year.

LOWER JHELUM CANAL.

(SUPERINTENDING ENGINEER—MR. W. P. SANGSTER, C.I.E.)

1. The expenditure (direct and indirect) amounted to Rs. 4,53,505, but Capital Account—
Kharif, 1918.
Rabi, 1918-19.
the recovery of Rs. 1,055 from the cultivators on account of acreage rate reduced it to Rs. 4,52,450. This brought the total outlay to the end of the year to Rs. 1,66,77,579. The expenditure was incurred chiefly on remodelling the Head Regulator, sluices, and Bay No. 1 of the Weir at Rasul; remodelling Main Line, Rattokala distributary, and certain distributaries of the Northern Branch; constructing quarters for Clerks and Subordinates at Rasul, for two sub-divisional officers at Shahjiwana and Uppi; and telegraph offices and signallers' quarters at Rasul and Baha-ud-Din.

UPPER JHELUM CANAL
FINANCIAL RECORD



N. B.—The intercepts in the red area show arrears of interest unpaid up to end of each year, which being added to the capital give sum at charge.

The intercepts between the black curves give the net income each year.

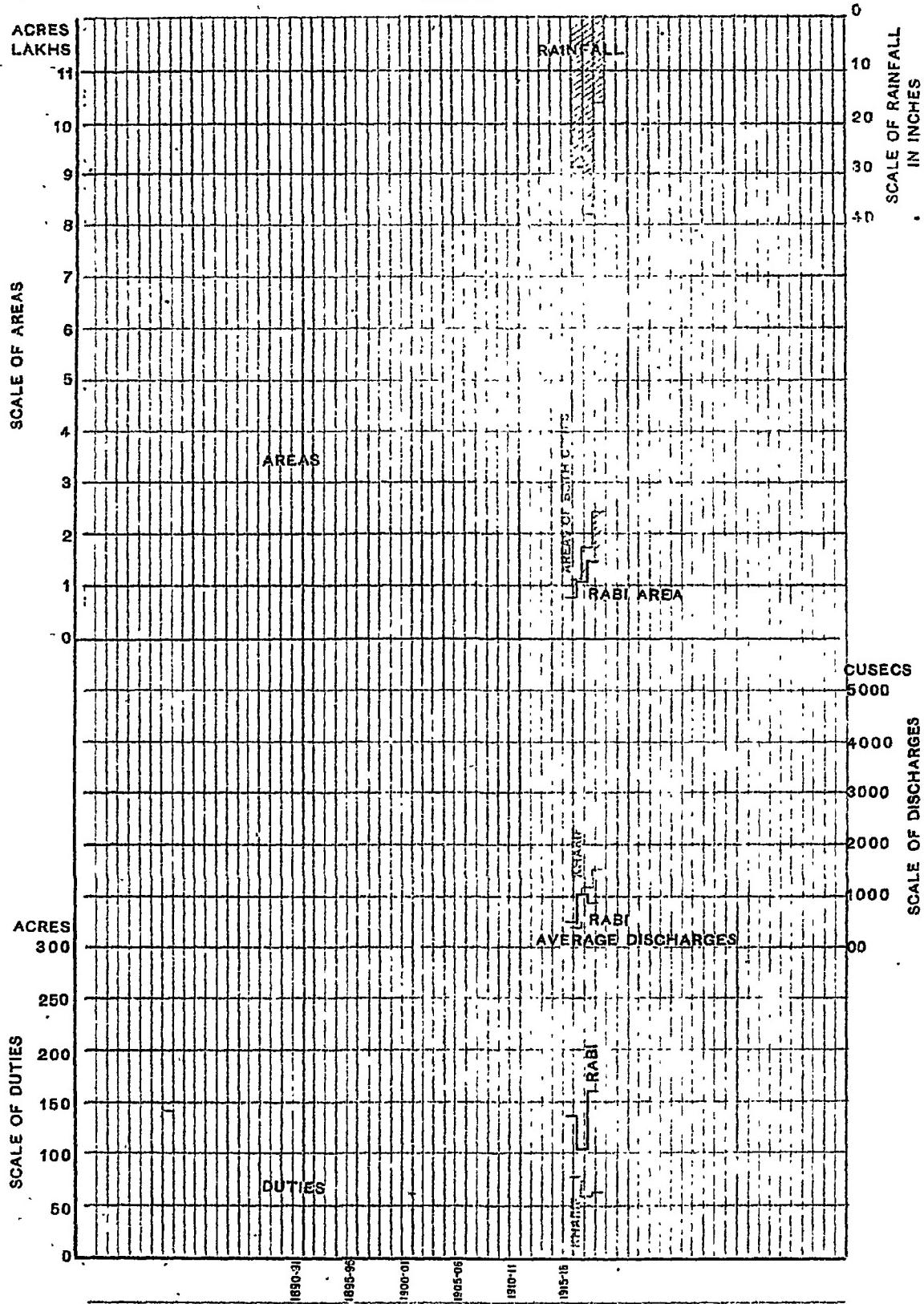
Construction commenced in 1905 and the canal was opened in 1915.

This canal being one of the triple project canals its financial record, considered alone, is largely fictitious. The financial record of the triple canal project as a whole is shown on a separate diagram facing page 26.

UPPER JHELUM CANAL

WORKING RECORD

-1918-19.

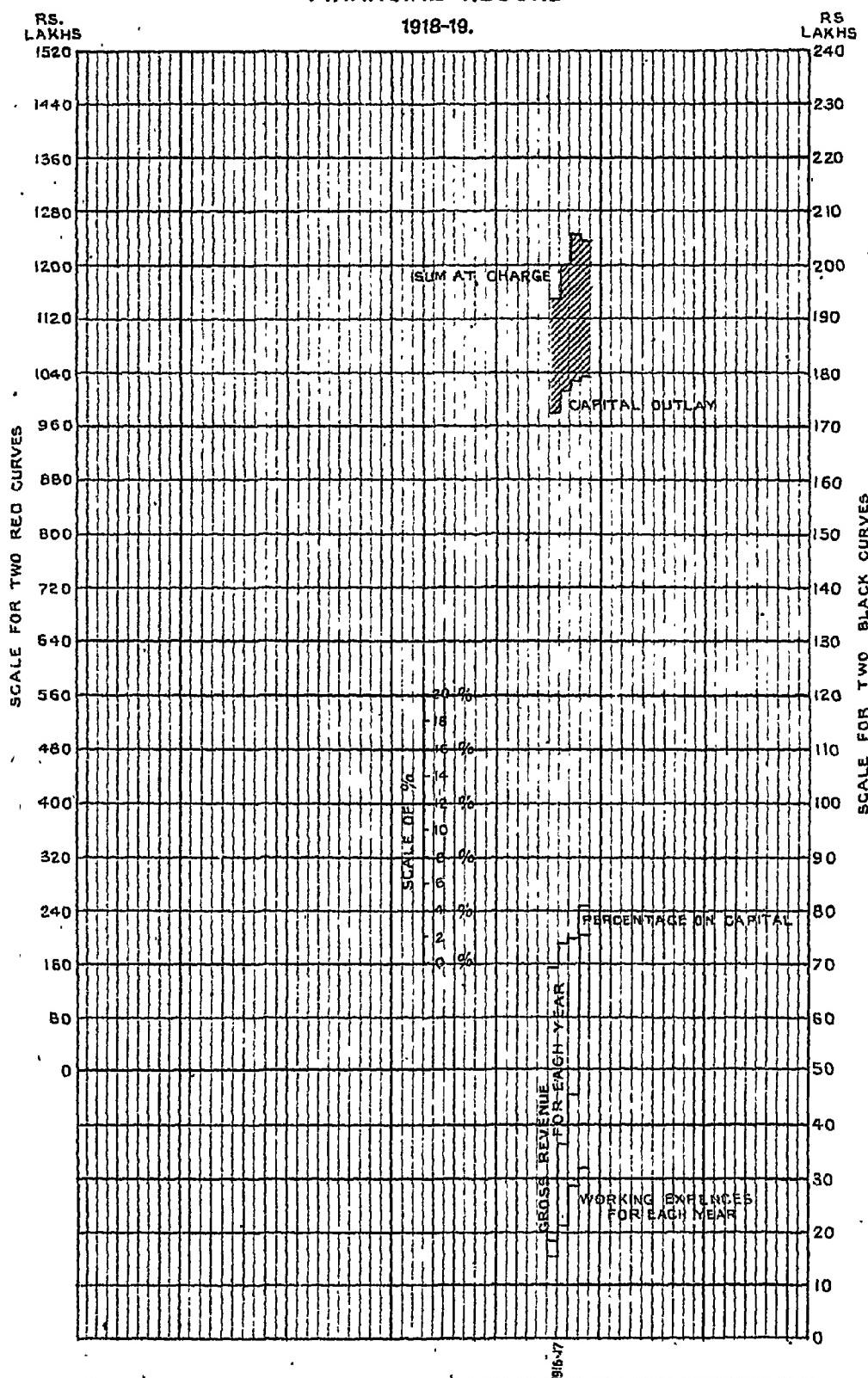


N.B.—The intercepts in the red area show the kharif acreage each year.

The discharges are measured at canal head and are averages for each crop.

The duties are derived from these areas and discharges.

TRIPLE CANAL PROJECT
UPPER JHELUM, UPPER CHENAB AND LOWER BARI DOAB CANALS COMBINED
FINANCIAL RECORD



N. B.—The intercepts in the red area show arrears of interest unpaid up to end of each year, which being added to the capital give sum at charge.

The intercepts between the black curves give the net income each year.

Name of Canal.	Construction commenced in.	Canal was opened in.
Upper Jhelum Canal	1905	1916
Upper Chenab Canal	1905	1912
Lower Bari Doab Canal	1907	1913

2. Expenditure amounting to Rs. 53,873 was incurred chiefly on raising Extensions and Improvements. the masonry cills and lengthening the upstream impervious floor of Fakirian Regulator; constructing a watchman's hut at R.D. 650, Main Line; pitching the right bank of Rasul walecourse; making bunds and dismantling shutters of the Rasul weir; communication road between Dhaulka and Hissam rest-house; and a motor road to connect Assianwala and Chaukera rest-houses; remodelling head regulator, Malkewala Minor and drainages on Southern Branch; extending avenues on channels in Hujjan Sub-Division; a reinforced concrete bridge over new Beriwala distributary; fixing Kennedy Gauge Outlets on Mithalak distributary; extending the combined vernacular office at Sargodha; and additions and alterations to the canal dispensary at Rasul.

3. Expenditure to the extent of Rs. 2,64,614 was incurred on the Maintenance and Repairs. annual maintenance of channels, masonry works, buildings, and on special repairs to undersluices floor; shutters in Rasul Weir Bays Nos. 2 to 7; downstream groynes of Rasul Weir; downstream berms Weir Bays Nos. 4 and 5; downstream talus of Weir Bay No. 1; weir groyne upstream and downstream; downstream floor of Northern Branch Head Regulator and providing sleepers and wooden keys for Rasul Baha-ud-Din Railway.

Nature of season and state of demand and supply.—
Kharif, 1918.
Rabi, 1918-19.

4. A very poor monsoon was the chief feature of the season 1918 as the following statement will show:—

DISTRICT.	CROP.	YEARS.			
		1915-16.	1916-17.	1917-18.	1918-19.
Shahpur ...	Kharif ...	Inches. 3.96 0.36	Inches. 14.36 1.78	Inches. 22.10 3.42	Inches. 5.88 2.80
	Total ...	4.82	16.14	25.58	7.68
	Rabi ...	1.98 0.86	0.77 0.85	17.77 2.22	5.16 2.47
Jhang ...	Kharif ...	2.34	10.62	19.99	7.68
	Total ...				

The kharif season opened unfavourably and continued so throughout. A fairly large area was sown, but with only moderate success owing to the scarcity of rain and to the exceptionally hot dry weather. Fortunately there were no hail-storms or other calamities, and the crop yield was up to the average. The winter rainfall did not benefit the wheat crop appreciably.

The total area remitted was 10,577 acres (including 2,106 acres remitted under Tenancy rules), 8,918 acres of which were remitted during kharif 1918.

The canal was closed at its head for 14 days during kharif and for 3 days during rabi for special repairs to works.

The demand for water was keen and the supply was generally sufficient throughout the year except in October 1918. The first rotational closure in October 1918 became necessary earlier than was anticipated and, unfortunately, a severe epidemic of influenza broke out soon afterwards, a combination of circumstances which considerably reduced the rabi sowings and in particular wheat sowings.

5. The areas irrigated and assessed during the year compare as follows with the corresponding figures of the averages of the two preceding triennia and of the year 1917-18 :—

Area irrigated—
Kharif, 1918
Rabi, 1918-19.

CROP.	AVERAGE OF THE 3 YEARS ENDING		AREA IRRIGATED DURING	
	1914-15.	1917-18.	1917-18.	1918-19.
Kharif	Acres. 242,643	Acres. 290,576	Acres. 231,872	Acres. 251,601
Rabi	573,812	571,894	533,598	525,895
Total ...	816,460	801,469	765,470	777,496

The increase in area irrigated in *kharif* was due to increased cotton and fodder sowings caused by higher prices. The decrease during *rabi* was mostly due to the shortage of water in October, and to the prevalence of a very severe influenza epidemic during the months of October and November, of which thousands of people died and others were unable to work for weeks. Thus the sowing of *rabi* crops suffered. It was partly due also to the untimely rotational closures of the branches. The supply in the river Jhelum began to fall early in September, and it fell so rapidly that the rotational closures had to begin much earlier in October than had been anticipated.

Out of the total area of 777,496 acres irrigated during the year 385,609 acres were in the proprietary villages and 391,887 acres in Colony villages.

6. The gross receipts (direct and indirect) amounted to Rs. 42,77,101, financial results based on collections — the working expenses to Rs. 8,60,215, and the net revenue to Rs. 34,16,886, giving a return of 20.49 per cent. on the capital outlay to the end

of the year. This return was about 1 per cent. less than that of the preceding year due to —

- (a) an increase of about Rs. 1,60,000 in the capital outlay;
- (b) the decrease in the area irrigated during *rabi* 1917-18 (the revenue on which was collected during the year) which was caused, as explained in last year's report, partly by a large area being sown and matured without receiving canal water and partly by the shortage of labour on account of recruiting activities and the prevalence of exceptionally severe malaria at the time of the *rabi* sowings, &c.

The figures for the year 1918-19 and the average of the preceding three years are compared below :—

Items.	Average (triennium, 1915-18.)	1918-19.
<i>Direct receipts.</i>		
Occupiers' rates	27,40,627	(a) 26,17,634
Miscellaneous receipts	63,992	(b) 65,285
Total direct receipts	28,04,619	26,82,919
Indirect receipts	10,25,226	(c) 15,94,182
Total direct and indirect... ...	44,29,845	42,77,101
Working expenses	9,05,862	(d) 8,60,215
Net revenue	35,23,983	34,16,886
Percentage on capital	21.73	20.49
Net revenue less interest	29,91,174	558,856
Percentage on capital	17.94	17.13

(a) The decrease under the Occupiers' rates as compared with the average of the previous three years was due to causes explained in paragraph 6 above. The rate per acre assessed works out to Rs. 3.41 against Rs. 3.43 for the previous triennium.

(b) The increase under miscellaneous receipts was due to larger realizations from water power and miscellaneous other receipts.

(c) The decrease follows the decrease under (a) above.

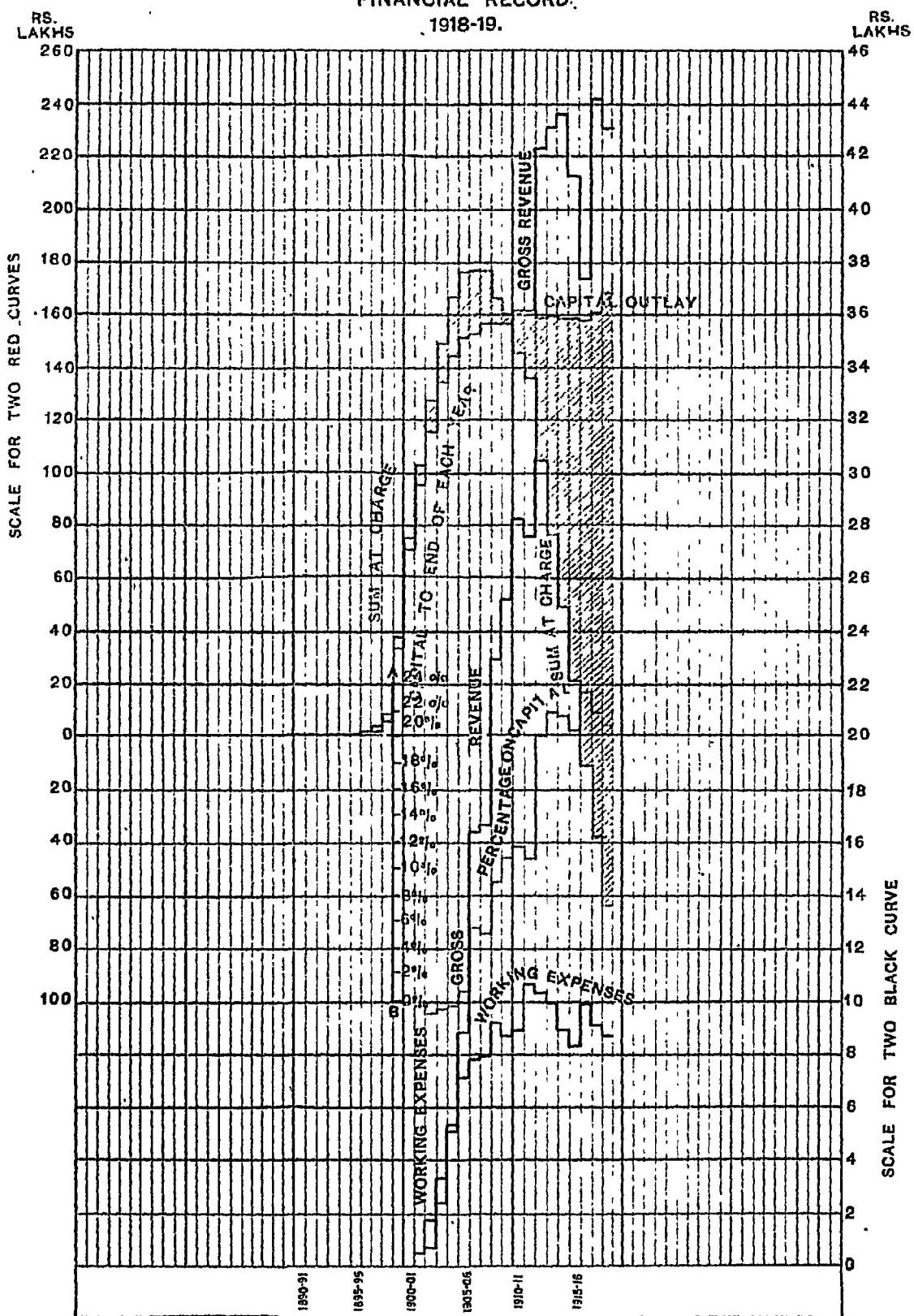
(d) The working expenses were about Rs. 45,000 less than the average of the last three years. This was due to curtailment of expenditure on maintenance of channels.

The rate per acre of area assessed was Rs. 1.12 against Rs. 1.15 in the preceding triennium.

LOWER JHELUM CANAL.

FINANCIAL RECORD.

1918-19.



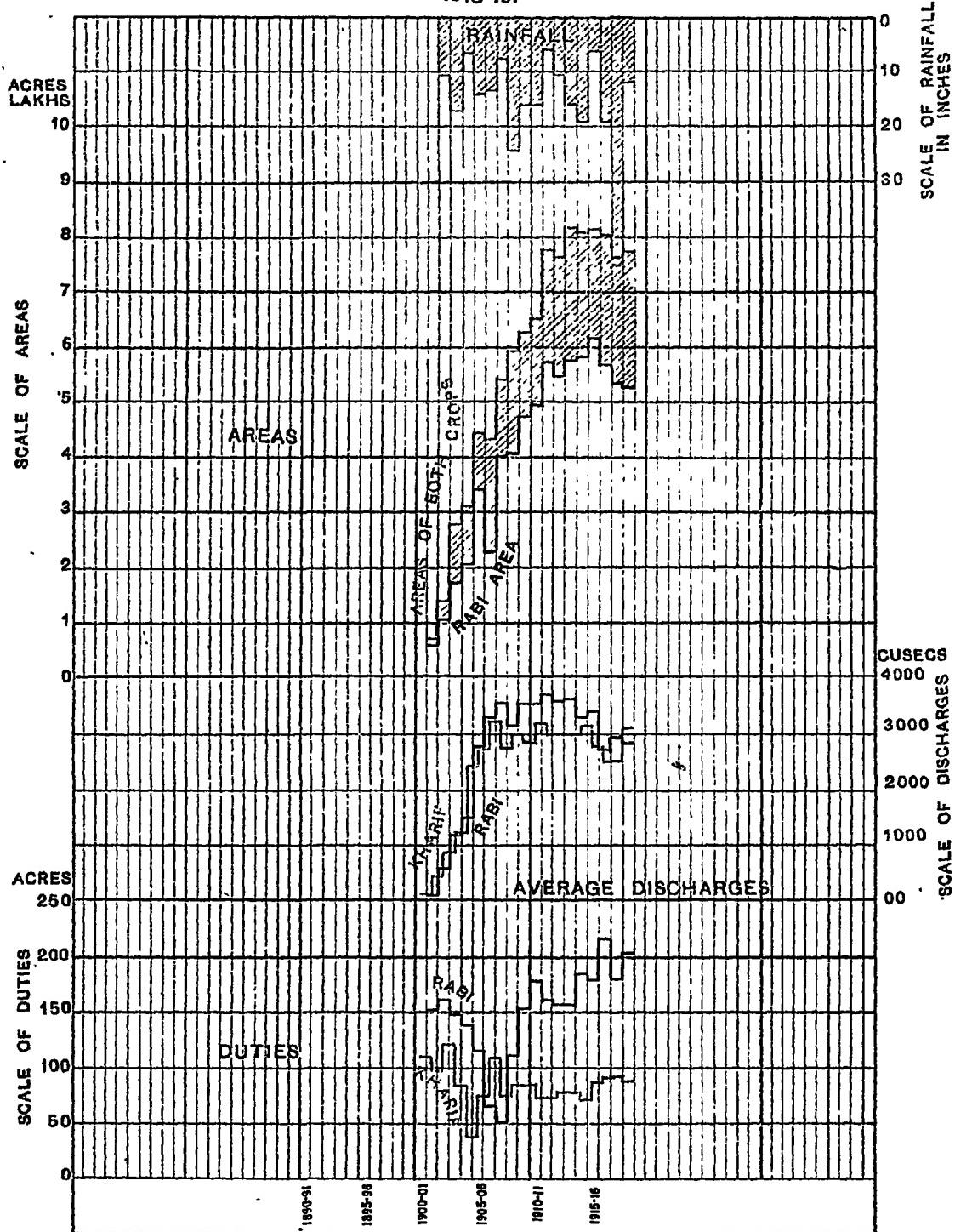
*N.B.—*The intercepts in the red area show arrears of interest which, added to the capital, give the sum at charge.

The intercepts in the blue area give the accumulated profits.

The scheme was commenced in earnest in 1898-99 and opened in 1901. Until 1905-06 the canal did not pay any interest on its capital cost this being due to free remissions of water rates on new irrigation.

LOWER JHELUM CANAL.

WORKING RECORD.
1918-19.



N.B.—The intercepts in red area give the Kharif irrigation each year. The discharges are measured at mile 14 of the main canal and give averages for each crop.
The duties are derived from these areas and discharges.

7. (a) The agricultural and other conditions of the year have been described in paragraph 4 above. The relative performances of the last five *rabi* seasons may be compared by the following values of Δ (Delta):—

<i>Rabi, 1914-15</i>	...	...	...	= 1.96
<i>Rabi, 1915-16</i>	...	...	...	= 1.6
<i>Rabi, 1916-17</i>	...	...	...	= 1.5
<i>Rabi, 1917-18</i>	...	...	...	= 1.7
<i>Rabi, 1918-19</i>	...	...	...	= 1.97

(b) The following works were completed during the year:—

- (1) Bay No. 1 of Rasul Weir: Crest wall raised to 711.5 and shutters removed.
- (2) Bays Nos. 3 to 9 of Undersluices: new gates installed.
- (3) Telegraph offices and Signaller's quarters at Rasul and Bahauddin.
- (4) A block (4 units) of Senior Clerks' quarters at Rasul.

The following works are in progress:—

- (1) Remodelling Main Line, Lower Jhelum Canal.
- (2) Remodelling Rattokala distributary.
- (3) Lower Subordinates' quarters at Rasul.
- (4) Remodelling Lalian and Bucha distributaries with their minors.

The remodelling works on several other distributaries, estimates for which have been sanctioned, could not be pushed on owing to shortage of labour and stringency of rates. Efforts are now being made to import labour from other centres.

(c) A satisfactory feature of the wheat crop was the improved outturn a benefit which is probably attributable to the rotational closures, as fewer waterings tend to produce better grain, although the straw may be somewhat less. Many zemindars are beginning to recognise this fact.

The American variety of cotton has almost entirely supplanted the "desi" variety, and, generally, with regard to the selection of seeds, zemindars are beginning to show more discrimination.

UPPER SUTLEJ INUNDATION CANALS.

(SUPERINTENDING ENGINEER,—MR. F. T. BATES.)

1. No expenditure was incurred during the year, but the canal received

Capital Account—
Kharif, 1918.
Rabi, 1918-19. a credit of Rs. 5,027 under the suspense account (stock transactions) and this reduced the total outlay to end of the year to Rs. 18,12,296 (direct and indirect).

2. Expenditure amounted to Rs. 10,619 against Rs. 12,186 in the previous year and was chiefly incurred on constructing bridges at R. Ds. 16,000 and 17,719 Upper Sohag Canal, at R. D. 17,000 of Turbat Minor and at R. D. 50 Sahiba Minor; a well at Ladhwala rest-house; and a wooden bridge at R. D. 15,000 Gulshah Minor, and also on remodelling outlets Wanawala distributary.

3. Expenditure amounted to Rs. 1,63,633 which, in addition to ordinary maintenance and repair, maintenance and silt clearance of channels, was incurred on the following works: Diversion cut in Manak Dehka; constructing a 2.5' fall at the tail of Manak Dehka diversion cut, Khanwali Canal; digging a channel above Dalla bridge, Lower Sohag Canal; river discharge observations at Beas and Sutlej; raising and repairing banks, Khanwali Canal.

4. The following table compares the irrigation of the year with that of the year 1917-18 and the averages of the two previous triennia :—

CROP.	AVERAGE OF 3 YEARS ENDING				AREA IRRIGATED DURING				TRIENNIA.	
	1914-15		1917-18.		1917-18.		1918-19.			
	Gross.	Net.	Gross.	Net.	Gross.	Net.	Gross.	Net.		
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	—	
Kharif ...	175,178	158,715	158,882	151,013	180,900	163,071	151,155	136,253		
Rabi ...	177,898	177,898	192,369	182,369	247,957	247,957	107,314	107,344		
Total ...	353,066	336,003	341,251	333,382	437,857	411,028	258,499	243,597		

The net area assessed during 1918-19 was less by 93,006 and 89,785 acres as compared with the averages of the two triennia ending 1914-15 and 1917-18, respectively, and by 187,431 acres as compared with 1917-18. This is quite satisfactory taking into consideration the fact that the monsoon of 1918 had commenced only in the middle of August and ceased early in September and that the river fell very low much earlier than usual in consequence of which the kharif and rabi crops, which required water during September, suffered severely.

5. The gross revenue collected amounted to Rs 8,46,909 and the working expenses to Rs. 3,76,397, giving a net revenue of Rs. 4,64,512 or a return of 25·63 per cent. on the capital invested. In the previous year the figures of net revenue and the percentage were Rs. 3,67,920 and 20·24. This favourable result was due to the very good rabi crop of 1917-18, the revenue for which was collected during the year.

6. (a) The following table shows the dates of opening and closing of the canals together with the corresponding dates of the previous year :—

NAME OF CANAL.	DATE OF OPENING.		DATE OF CLOSING.		NO. OF DAYS CANAL WAS IN FLOW.		REMARKS.
	1918.	1917.	1918.	1917.	1918.	1917.	
Katora ...	Afternoon, 7-5-18.	Forenoon, 9-5-17.	Afternoon, 30-9-18.	Afternoon, 19-11-17.	144	195	
Khanwah ...	Afternoon, 19-5-18.	Forenoon, 14-5-17.	Afternoon, 18-9-18.	Afternoon, 31-10-17.	105	144	
Upper Sohag ...	Afternoon, 6-6-18.	Forenoon, 14-5-17.	Afternoon, 1-12-18.	Afternoon, 10-12-17.	208	211	
Lower Sohag ...	Afternoon, 1-5-19.	Forenoon, 14-5-17.	Afternoon, 1-10-18.	Afternoon, 28-11-17.	155	168	

(b) The river supply during the months of May, June and July was low and the canals were drawing a fair supply except the Jalloke head of Khanwah Canal which, owing to the river starting erosion just above the head, got silted up early in June and it was only after a great deal of trouble and labour that it was partly set right in August. The Reserve Head Khizra of this canal also did not work as the river creek on which it was situated got silted up and was, therefore, poorly fed by the river. The New Kassoki Head of the Katora Canal got silted up towards the end of June due to river erosion, but the old Kassoki Head or its Reserve Head worked satisfactorily. There was no trouble with the Nijabat Head and the services of the Mokal, its Reserve Head, were not required. The river, however, attacked the new reach of this head and washed away a length of 1,500 feet.

There was no trouble with the Khiwa Head of the Lower Sohag Canal and the Reserve Head, called the Upper Doma Head, was not opened. The river supply fell early in October and the Upper Doma Head was situated too far downstream to be in a position to help the canal at that time. The failure

of the monsoon was the real cause of a low river in October. There were no floods in the river during September. In fact the supply in the river had gone down to 10 feet in the 2nd week of that month.

This was a very unfavourable year for the inundation canals and the area under the *rabi* crops was comparatively small.

SIDHNAI CANALS (INCLUDING THE KORANGA, FAZAL SHAH AND ABDUL HAKIM, SUBSIDIARY CANALS.)

(SUPERINTENDING ENGINEER—MR. J. W. GILLMAN).

1. No expenditure was incurred during the year, but the suspense account was credited with Rs. 1,553 on account of stock transactions and this reduced the total expenditure (direct and indirect) to end of year to Rs. 13,30,67/-.
- Capital account—
Kharif, 1918.
Rabi, 1918-19.*

Settlers Account—The balance of Rs. 248-6-6 to end of the year 1917-18 on account of repairs to bridges on Sidhnai Canal was credited to Tacavi during the year and the account squared.

2. Expenditure was Rs. 8,833 against Rs. 7,696 in the preceding year and was incurred on remodelling distributaries and on constructing quarters for the use of subordinates at Jodhpur.
- Extension and Improvements.*

3. The expenditure amounted to Rs. 40,485 against Rs. 54,010 in the previous year. In addition to the usual maintenance of works the following were carried out:—
- Maintenance and Repairs.*

Providing Needles for Sidhnai Dam; special repairs to Sidhnai Dam, its downstream talus and the damaged buildings at Rashida; and strengthening banks Sidhnai Canal.

4. The total rainfall at Kabirwala was 5·81 inches (4·47 inches during *Kharif* and 1·34 inches during *Rabi*) and supply—
*Kharif, 1918.
Rabi, 1918-19.* against an average of 6·49 inches, and rain did no damage to standing crops.

The supply remained low throughout almost the whole year and the Sidhnai Canal was dry from 25th October 1918 to 4th February 1919.

The outstanding feature of the working of this canal during the year was that the winter supply was very deficient and in consequence wheat could not be sown extensively.

5. The following table compares the irrigation effected on the whole system with the figures of the year 1917-18 and the averages of the two previous triennia:—
- Irrigation—
Kharif, 1918.
Rabi, 1918-19.*

Crop.	AVERAGE OF 3 YEARS ENDING		AREA IRRIGATED.	
	1914-15.	1917-18.	1917-18.	1918-19.
			Acres.	Acres.
Kharif	...	127,037	121,380	131,207
Rabi	...	161,507	174,336	187,236
Total	...	278,544	295,716	318,442
				220,307

The failed area in *kharif* amounted to 25,640 acres or 21·15 per cent. of the area irrigated against 19·97 per cent. in the previous year. During *rabi* 9,954 acres or 9·21 per cent. of the area irrigated were remitted against 8·29 per cent. in 1917-18.

The high percentage of *kharaba* was due to low supply in the river Ravi at head of the Sidhnai Canal.

6. The total income from all sources amounted to Rs. 8,11,923 against Financial results based on collections— Rs. 7,01,625 in preceding year. Working expenses amounted to Rs. 95,788 against Rs. 1,58,769 *Rabi*, 1917-18. *Kharif*, 1918. in 1917-18. The net income was, therefore, Rs. 7,16,135 or 53·8% per cent. on the capital outlay against Rs. 5,42,856, or 40·75 per cent. in the preceding year.

The uncollected balance of the assessment of occupiers' rates amounted to Rs. 1,582.

7. The influenza epidemic was raging furiously all over the country during the months of September and October 1918 and this hampered the sowing of rabi crops considerably. Food stuffs were dear and fodder very scarce.

Owing to the close vicinity of the Lower Bari Doab Canal, there is general complaint of tenants going away to that canal. Rains in the hills and plains brought some water in February 1919 which proved helpful to the crops. Great damage was done by hail storm in April towards Rashida, Khanewal and Rawan.

No new works of any magnitude were undertaken owing to the war.

INDUS INUNDATION CANALS.

(SUPERINTENDING ENGINEER—J. W. GILLMON).

1. The expenditure (direct and indirect) amounted to Rs. 992 as Capital account— compared with a credit balance of Rs. 1,598 *Kharif*, 1918. in the preceding year. It was mainly incurred *Rabi*, 1918-19. under the head "Suspense."

2. Rs. 25,713 were spent against Rs. 18,966 in the preceding Extension and Improvements. year. The following were the more important works in progress :—

Improving Baja flood embankment and the Manka Canal from Gadai to Loharwal ; constructing a wooden bridge at R. D. 120,500 of Shoria diversion ; Leghari ring bund between bund No. 3 and Dhundi Kutab Canal ; Groynes for the Dhundi Kutab Canal and Sahiban Canal and a diversion for the Kadra Canal ; and building outhouses and stables for Fazilpur rest-house.

3. The expenditure amounted to Rs. 1,23,612 as compared with Maintenance and Repairs. Rs. 1,90,140 in the preceding year. Ordinary maintenance and repairs, silt clearances of canals, strengthening of certain flood embankments and other miscellaneous works were carried out.

4. The rainfall during *kharif* was 1·90 inches and during *rabi* Nature of season and state of demand 1·25 inches against 11·55 inches and 1·38 inches and supply— in the preceding year and average of 4·21 inches *Kharif*, 1918. and 1·59 inches for *kharif* and *rabi*, respectively, *Rabi*, 1918-19. during the last 23 years. In May the river Indus rose sufficiently high for timely opening of the canals and this state continued up to June. But the supply soon after fell and remained low and consequently canal supplies were precarious. The river never rose above 33 feet. The demand was keen. Kadra was the only canal which worked well but little cultivation is done on this system. The Massuwah, Fazilwah, Manka, Kasturi and Dhingana Canals ceased to flow early. The Nur Dhundi and Sahiban canals ran throughout the winter with a small but extremely valuable supply of water.

The closing of creeks during September at heads of Nur Dhundi and Dhundi Kutab Canals at a cost of about Rs. 300 saved the crops on these canals.

The following statement shows the period during which canals were in flow :—

Name of Canal.	DATES OF		No. of days canal was in flow.
	Opening.	Closing.	
Masuwah	10th May 1918 ...	9th September 1918. 110
Fazilwah	6th May 1918 ...	21st September 1918. 74
Manka	5th May 1918 ...	12th September 1918. 120
Shorin	4th May 1918 ...	30th September 1918. 149
Kasturi	6th May 1918 ...	8th September 1918. 93
Dhingana	5th May 1918 ...	7th September 1918. 123
Chibri	11th May 1918 ...	26th September 1918. 136
Sahiban	15th May 1918 ...	30th September 1918. 195 31st March 1919
Gamun	15th May 1918 ...	30th September 1918. 120
Nur Dhundi	15th May 1918 ...	31st March 1919. 314
Dhundi Kntab	15th May 1918 ...	5th October 1918. 142
Kadra	15th May 1918 ...	22nd October 1918. 159

Area irrigated—
Kharif, 1918,
Rabi, 1918-19.

5. The following table compares the areas irrigated during the year with the figures of 1917-18 and the averages of the two previous triennia :—

Crop.	AVERAGE OF 3 YEARS ENDING		1917-18.	1918-19.
	1914-15.	1917-18.		
		Acres.	Acres.	
Kharif	173,025	152,702
Rabi	60,570	82,302
Total	...	233,595	235,004	234,213
			121,144 (A) 59,953 (B)	181,087

The figures exhibited at (A) and (B) include the areas remitted which amounted to 40,852 acres in *Kharif* and 9,949 acres in *Rabi*.

The gross areas irrigated during *kharif* and *rabi* were 121,144 acres and 59,953 acres respectively against 140,042 acres and 64,171 acres during 1917-18. The decrease in irrigation during 1917-18 was due to damage done by the hill torrents in consequence of the heavy rainfall in the Suleman Hills which caused floods of unprecedented violence, and this year it is due to short supply and bad soil.

6. The total income from all sources was Rs. 4,29,790 against financial results based on collections—
Rabi, 1917-18.
Kharif, 1918.
Rs. 4,41,690 in 1917-18 and the total expenditure under all heads amounted to Rs. 2,70,886 against Rs. 3,99,182. The net profit was, therefore, Rs. 1,55,904 (a percentage of 5·32 per cent. on the capital outlay)

against Rs. 42,508 or 1·42 per cent. in the preceding year and an average of Rs. 72,587 in the previous triennium.

The uncollected balance of assessment of occupier's rate was Rs. 29,846.

General remarks. The year was one of unusual dryness owing to inadequacy of rainfall and low supply in the river and consequently the canals generally worked badly. The Fazilwah canal was eroded by river erosion during July 1918 from R. D. 2,000 - 4,800, and also there was erosion opposite subsidiary head of Dhundi Kutab Canal. The hill torrent water was also very restricted in quantity.

Influenza and malaria in very severe form, prevailed throughout, which caused much dislocation and a very large number of deaths occurred.

The damage to crops was also done by crickets (called *Tiddi*) during July which destroyed almost the entire sowings of *jowar* and cotton.

The following works of importance are either under contemplation or in hand :—

- (a) Remodelling of Kasturi Canal.
- (b) Providing masonry outlets on certain canals.
- (c) Remodelling of Dhingana.
- (d) Remodelling of Sohan Branch.
- (e) Remodelling of Sahiban Branch and Banuhan Branch.

On the above canals, water does not reach the tail even at times of high supply and a great deal of inconvenience is caused. Once these channels have their supplies equitably distributed, there should be an increase in revenue at a comparatively small cost.

Minor Irrigation Works.

SHAHPUR IMPERIAL INUNDATION CANALS.

(SUPERINTENDING ENGINEER—MR. W. P. SANGSTER.)

Capital Account—
Kharif, 1918.
Rabi, 1918-19.

1. Expenditure amounting to Rs. 9,107 was incurred on construction of certain buildings.

Extensions and improvements.

2. Rs. 16 were spent on minor works only.

3. Expenditure to the extent of Rs. 25,889 was incurred on silt clearance and on the usual maintenance and repairs.

4. The rainfall was 9·09 inches against 26·48 inches in the previous year.

Nature of season and state of demand and supply—
Kharif, 1918.
Rabi, 1918-19.

During the *kharif* season the rainfall was 6·49 inches and during the *rabi* 2·60 inches. Of the *kharif* rainfall 2·16 inches fell in April, 0·38 inches in June, 1·59 inches in July, 1·56 inches in August, and 0·81 inches in September. There was no rain during May 1918. During *rabi* the month of November was rainless and the rainfall in October and December to March aggregated to 2·60 inches only.

Area irrigated—
Kharif, 1918.
Rabi, 1918-19.

5. The irrigation of the year compares as follows with the averages of the two previous triennia and with the figures of 1917-18 :—

Crop.	AVERAGE FOR THREE YEARS ENDING		ACTUAL FOR	
	1914-15.	1917-18.	1917-18.	1918-19.
Kharif	Acres. 18,786	Acres. 15,589	Acres. 17,648	Acres. 5,825
Rabi	... 24,695	... 23,133	... 24,985	... 10,902
Total	43,481	38,722	42,633	16,727

The decrease is due to short supply in the river. The area successfully matured and assessed was 11,972 acres as against 39,518 acres in the previous year, and 35,849 acres the average of the previous triennium, the decrease being due to unfavourable rainfall and to the inadequate river supply.

Revenue was remitted on 4,755 acres, of which 1,140 acres were due to short supply, 2,810 acres to bad germination, and 805 acres to miscellaneous causes.

6. The gross revenue realised amounted to Rs. 82,097 and the working expenses to Rs. 64,010 leaving a net revenue of Rs. 18,087 which is equivalent to a return of Rs. 8·01 per cent. on the capital outlay to date.

*Financial results based on collection Rabi, 1917-18.
Kharif, 1918.*

Details compare as follows with the averages for the preceding triennium :—

Details.	Average for the previous 3 years ending 1917-18.	Actual for 1918-19.
Receipts direct	81,209	61,479
,, indirect	30,059	20,618
	Total ...	1,14,268
Working expenses	53,520	64,010
	Net revenue ...	60,748
Percentage of net revenue on capital	28·14	8·04

The decrease under revenue is due to less irrigation and larger remissions during *kharif* 1918 owing to the unfavourable season and to a larger expenditure under working expenses.

7. The Imperial Inundation Canals began and ceased to flow on the following dates :—

General remarks.

Name of Canal.	Began to flow	Ceased to flow	Period of flowing days.
Eastern Station Canal ...	8th May 1918 ...	25th August 1918	67
Western Station Canal	8th May 1918 ...	28th August 1918	59
Sahiwal Canal ...	9th May 1918 ...	29th August 1918	88

Owing to low supply in the river the water failed to enter the canals in September. They were opened in May and closed as early as August.

GHAGGAR CANALS.

(SUPERINTENDING ENGINEER—MR. G. C. LAURIE.)

1. Expenditure amounting to Rs. 3,872 was incurred in constructing Capital Account—
a subordinate's rest-house at Jagmalera. This
Kharif, 1918.
Rabi, 1918-19.
brought the outlay to date to Rs. 6,65,483
(Imperial Rs. 3,79,297, Contribution Rs. 2,86,186).

2. Expenditure amounted to Rs. 2,624 (Imperial Rs. 2,099, Contribution Rs. 525) and was incurred on petty Extensions and Improvements.

3. Expenditure amounting to Rs. 8,136 (Imperial Rs. 6,412, Contribution Rs. 1,724) incurred during the year Maintenance and Repairs.

4. (a) *Kharif.*—There were light showers of rain during June, July, Nature of season and state of demand—
Kharif, 1918.
Rabi, 1918-19.
August and September hardly sufficient to benefit the crops. The heaviest fall of 1.30 inches recorded at Otu, occurred on 26th August when it was too late for the *kharif* crop. Rainfall was considerably in defect throughout the area, and this, combined with serious insufficiency of supply in the reservoir, caused the *kharif* crop to be a complete failure.

Water first reached Otu weir on 12th June but the supply remained very low, and it was only possible to open the Northern Ghaggar Canal, with less than one quarter of its full supply, for ten days for rice sowing. The canals were dry throughout July. During the first half of August the Northern Canal ran with an insignificant supply, and it was not until the 25th August that the canals could be opened with a satisfactory supply, while they were practically dry again by the end of September, though the Northern Canal continued to flow with an unimportant supply during the first half of October. Water passed over the weir from 27th August till 5th September. The Northern Canal was in flow for 52 days and the Southern Canal for 36 days.

(b) *Rabi.*—There was practically no rainfall except a very few light showers during January which were quite insufficient for maturing the crop. The area sown was small owing to the poor monsoon and even that small area gave poor results.

(c) *Rainfall.*—The average rainfall of all stations was British 3.70 inches and Bikaner 2.93 inches as compared with 33.60 inches and 29.88 inches respectively, during 1917-18. The rainfall was distinctly below the average, though that of the previous year had been abnormally great.

5. The following table shows the area irrigated in British and Bikaner territories during the last 5 years ending 1918-19. The area in British territory includes area assessed by the Civil Department.

Crop.	1914-15.			1915-16.			1916-17.			1917-18.			1918-19.		
	British.	Bikner.	Total.	British.	Bikner.	Total.	British.	Bikner.	Total.	British.	Bikner.	Total.	British.	Bikner.	Total.
Kharif	9,380	1,663	10,993	4,218	12	4,230	10,237	3,254	13,491	9,603	1,077	10,680	9,568	1,964	11,532
Rabi	6,403	8,066	21,463	3,156	20,944	26,174	18,090	8,788	26,876	12,040	26,576	40,387	6,394	1,346	7,740
Total	15,000	8,066	24,391	4,218	3,156	7,374	20,237	3,254	23,531	12,220	11,280	30,414	19,214	1,232	20,750
Total number of days canal was in flow.	102	100	202	50	56	106	92	93	95	128	122	52	52	36	2,070
Northern Canal.		Southern Canal.													

The figures in the above table do not include the area under *palever*.

The land under fluctuating assessment is not subject to water rates but the canals receive a credit for any fluctuating revenue in excess of an average of Rs.37,000 per annum during a ten years' period.

The amount of occupiers' rates assessed was Rs. 151 in *kharif* and Rs. 4,217 in *rabi* and the rate per acre assessed works out to 6.29 and 2.50, respectively.

6. The operations of the year resulted in a loss of Rs. 8,514 which is equivalent to 2.24 per cent. on the capital outlay compared with a loss of Rs. 12,165 equivalent to 3.23 per cent. in the previous year.
 Financial results based on collections—
Kharif, 1918.
Rabi, 1917-18.

The question of the financial position of these canals was referred to the Financial Commissioners, Punjab, in May 1918 who left it for consideration till after the completion of the settlement operations in the Sirsa Tahsil of the Hissar District which were commenced only on 1st October 1919.

7. (a) *Agricultural and other conditions of the year.*—The Canals were in flow for a very short period as above stated.

The area remitted in British Territory was 28 acres in *kharif* and 330 acres in *rabi*.

The approximate value of crops matured on the Ghaggar Canals in British Territory amounted to Rs. 3,56,104 against Rs. 7,78,659 in the previous year. It will thus be seen that these canals are of great public benefit to a very dry tract.

The principal crops grown are wheat and rice.

(b) *Nature and scope of new works contemplated and progress made on the preparation of new projects.*—The proposal for raising the reservoir level by 3 feet has been deferred pending a decision regarding Bhakra Dam Project on the Sutlej River.

There is at present no other project for extending the canals or increasing the supply of water.

8. The following statement of irrigation has been supplied by the Working of the Ghaggar Canals in the Bikaner State :—

Canals.	1917-18.			1918-19.		
	Kharif.	Rabi.	Total.	Kharif.	Rabi.	Total.
				Acres.	Acres.	Acres.
Northern Canal ...	1,218	5,957	6,575	66	819	885
Southern Canal ...	459	1,637	2,096	40	423	463
Total	1,677	6,994	8,671	106	1,242	1,348
Flow ...	1,677	6,994	8,671	106	1,242	1,348
Lift ...	...	...	...	..	...	...
Total as above	1,677	6,994	8,671	106	1,242	1,348

The following table shows the working of the canals in the Bikaner State :—

	Particular.		
		1917-18.	1918-19.
Water rate	Receipts	Rs.	Rs.
...	17,457	2,003	
Miscellaneous	... ... ...	415	291
	Total	17,872	2,294
Establishment	Working expenses.		
...	3,127	2,944	
Other expenses	... ... ...	4,635	5,575
	Total	7,762	8,519
Profit or loss (net)	...	10,110	- 0,225

It will be seen that the Bikaner State suffered a loss of Rs. 2.18 per cent. on the working of the Canals for the year on the Contribution capital account of Rs. 2,86,186.

LOWER SUTLEJ INUNDATION CANALS.

(SUPERINTENDING ENGINEER—MR. J. W. GILLION.)

1. These canals are classified under 43—Minor Works and Navigation for which no capital account is kept.

*Capital Account—
Kharif, 1918.
Rabi, 1918-19.*

2. The expenditure amounted to Rs. 1,05,050 against Rs. 43,496 in the preceding year. The more important works undertaken were:—

Two diversions—one escape of the head regulator for the Mailsi Canal; one diversion of the Mohammadwah Canal; making flood embankment between the Mailsi Canal and the Ghulamwah Canal; new head regulator for the Thadda Minor and Junction Channel to feed Sheikhwah Sharqia Distributary of the Bahawalwah Lodhran Canal; and remodelling Diwanwah Branch.

3. The expenditure amounted to Rs. 86,510 against Rs. 92,240 in the preceding year and was incurred on ordinary maintenance of channels and silt clearances etc.

4. The total rainfall during *kharif* was 2·10 inches in tehsil Lodhran and 2·29 inches in taluk Mailsi against an average of 4·16 inches and 5·18 inches, respectively. During *rabi* it was 2·43 inches in tehsil Lodhran and 0·97 inches in tehsil Mailsi against the average of 1·25 inches and 1·10 inches respectively. The supply in the river was very low and the demand throughout the year was keen.

The following statement gives the dates of opening and closing of the Canals during the year:—

Name of Canals.	DATES OF		No. of days canal was in flow.
	Opening.	Closing.	
Hajiwah	5th June 1918 ...	12th Sept. 1918 ...	98
Mailsi	9th June 1918 ..	3rd Decr. 1918 ...	178
Mohammadwah ...	26th May 1918 ..	6th Nov. 1918 ...	161
Bahawalwah-Lodhran ...	28th May 1918 ...	8th Octr. 1918 ...	132

Towards the end of the season the heads of the Hajiwah and Bahawalwah-Lodhran Canal silted up entirely, thus closing off their supply for the *rabi* irrigation. The Bahawalwah-Lodhran Canal continued to be supplied from Mohammadwah through the Haveli Connecting Channel but the supply in the Mohammadwah also being short, the irrigation on both was affected. The Mailsi Canal was closed before the supply failed owing to the necessity for drawing off the water at the site of the new escape.

5. The following table compares the areas irrigated and matured in 1918-19 with the figures of 1917-18 and the averages of the two preceding triennia:—

Crop.	AVERAGE FOR THREE YEARS ENDING		AREAS IRRIGATED DURING.	
	1914-15.	1917-18.	1917-18.	1918-19.
Kharif	141,878	144,410	161,821	96,984
Rabi	159,975	198,137	203,363	92,932
Total ...	301,853	342,547	365,184	189,916

The failed area amounted to 44,636 acres (37,276 during *kharif* and 7,260 during *rabi*) against 63,155 acres (46,454 during *kharif* and 16,701 during *rabi*) in the preceding year. Absence of any rain of appreciable intensity and shortage of water in the canals as a result of low river, accounted for deficient irrigation. *Rabi* sowings were also delayed on account of influenza. Some area on the Hajiwah Canal was also damaged by locusts during September.

6. The total income from all sources was Rs. 5,36,639 against Financial results based on collections—
Rabi, 1917-18. Rs. 6,68,484 in 1917-18, and the total expenditure *Kharif, 1918.* Rs. 3,44,927 against Rs. 2,52,089 in the preceding year. The net revenue amounted to Rs. 1,91,712 against Rs. 4,15,395 in 1917-18.

The uncollected balance of assessment of occupier's rate amounted to Rs. 1,243.

7. The year was an unfortunate one as regards irrigation on account General remarks. of very serious and rapid river erosion which occurred in August and September 1917 opposite the Mailsi Canal, a short distance above the head and escape regulator at Islam. As a temporary expedient, a small diversion of the canal was excavated during 1917-18 which could carry about 3,000 cusecs safely, but as any breach in this diversion during the rain would have entailed the entire cutting off the supply, it became necessary this year to use a subsidiary head which gave less supply. Fortunately no heavy floods came and the new bunds at Islam were not breached.

Progress on works, more specially in the Mailsi Sub-Division was hampered by scarcity of labour caused partially by a malarial epidemic and partly due to a recruiting campaign, and criminal tribe labour was, therefore, introduced for urgent and important works in progress at Islam (Mailsi Canal).

No important works are contemplated at present.

CHENAB INUNDATION CANALS.

(SUPERINTENDING ENGINEER—MR. J. W. GILLMON.)

Capital Account—
Kharif, 1918.
Rabi, 1918-19.

1. There is no capital account for these canals. They are classified under 43—Minor Works and Navigation.

2. The expenditure was Rs. 6,884 against Rs. 16,172 in 1917-18, incurred mainly on piping the Shahpur Branch of the Extension and Improvements. Sikandrabad Canal and the tail Panjani and Lang Minor of the Gajjuhaita Canal; building masonry outlets on the Sikandrabad Canal from Muzaffarabad to Ambala Regulator and making a new bund in the Bijli creek of the same canal.

3. The expenditure was Rs. 83,861 against Rs. 79,552 in the preceding Maintenance and Repairs. year. It was incurred on silt clearances of the canals, repairing and strengthening bunds and banks, etc., etc.

4. The rainfall during *kharif* was 2.64 inches in tehsil Multan and 2.36 inches in tehsil Shujabad against the Nature of season and state of demand averages of 5.13 inches and 4.57 inches, respectively. During *rabi*, it was 1.11 inches in *Kharif, 1918.* Multan and 2.05 inches in Shujabad against an *Rabi, 1918-19.* average of 1.47 and 1.14 inches, respectively.

The river Chenab rose sufficiently high early in May and the Sikandrabad Canal, which requires water earliest as it has more indigo than any other and irrigates a large acreage of garden lands, was opened on 6th May 1918. This rise of the river continued for a short period only and it then dropped much below its normal level. The supply was throughout poor and

the canals had to run by rotation. The following statement gives the dates of opening and closing of canals : -

Canals.	DATE OF		No. of days canal was in flow.
	Opening.	Closing.	
Mattithal	31st May 1918	7th September 1918.	89
Daurana Langana	8th May 1918	22nd September 1918.	136
Wali Mohammad	8th May 1918	22nd September 1918.	136
Sikandrabad	6th May 1918	21st September 1918.	138
Gajjuhatta	6th May 1918	21st September 1918.	138
Bilochanwah	12th May 1918	12th September 1918.	107

The season was characterised by the absence of any rain of appreciable intensity and the canals ceased running in September as a result of low river, and their early closure accounts for deficient irrigation.

Area irrigated—
Kharif, 1918.
Rabi, 1918-19.

5. The following table compares the areas irrigated during 1918-19 with the figures of 1917-18, and the averages of two previous triennia :—

Crop.	AVERAGE OF 3 YEARS.		AREA IRRIGATED DURING	
	1914-15.	1917-18.	1917-18.	1918-19.
Kharif	100,548	91,703	97,444	76,487
Rabi	99,581	109,831	131,598	50,142
Total ...	200,129	201,534	229,042	126,629

The area which failed to mature was 23,908 acres, or 31.25 per cent. of the area irrigated during *kharif* and 4,398 or 8.77 per cent during *rabi*.

Short supply due to abnormally low river and bad soil were the chief, if not the only, causes which accounted for these high percentages of remissions. Under the former head were remitted 22,656 acres or 29.56 per cent. of the total area irrigated during *kharif* and 1,298 acres or 2.59 per cent. during *rabi* whereas under the latter 1,195 acres or 1.56 per cent. and 24.47 acres or 4.88 per cent. were granted remissions during *kharif* and *rabi* respectively.

6. The total income from all sources during the year was Rs. 4,77,688 against 5,42,126 in 1917-18 and the total expenditure under all heads was Rs. 1,75,527 against Rs. 1,49,753 in the preceding year. The net income was, therefore, 3,02,111 against Rs. 3,92,373 in the preceding year.

The uncollected balance of the assessment of occupier's rate was Rs. 2,197.

General remarks.
7. Both the area irrigated and the area assessed were poor this year and the results were not satisfactory.

The influenza epidemic was raging furiously all over the country during the months of September and October and this hampered the sowings of the rabi crop considerably. Food stuffs were dear and fodder very scarce.

MUZAFFARGARH INUNDATION CANALS.

(SUPERINTENDING ENGINEER—J. W. GILLMON.)

Capital Account—
Kharif, 1918.
Rabi, 1918-19.

1. No Capital Account is kept for these canals. They are classified under 43—Minor Works and Navigation and Agricultural.

2. The expenditure amounted to Rs. 21,764 against Rs. 38,759 in the preceding year and was incurred mainly on Extension and Improvements, constructing an Inlet Regulator; making up retired bank, cut and diversion; excavating a new Minor; and also on piping and remodelling distributaries.

In addition to the above Rs. 1,752 against Rs. 3,427 during the preceding year were spent from the "Agricultural Fund" on the construction of a *pacca* well in the compound of Khangarh rest-house.

3. The expenditure amounted to Rs. 1,65,326 against Rs. 1,68,461 during 1917-18 and was incurred on ordinary silt clearances of the canals, and such works as repairing breaches and regulators; and strengthening and raising banks and bunds, etc., etc.

In addition to the above Rs. 25,135 against Rs. 25,616 in 1917-18, were spent from the "Agricultural fund" on maintenance of rest-houses and embankments.

4. The season was exceptionally dry, with an abnormally low record of rainfall. Early in May the rivers Indus and Chenab rose sufficiently high and remained so for a short period, up to about the end of June, after which the rivers dropped much below their normal levels and river supplies were lower than in the preceding year during the whole of the monsoon period. Consequently the supply in the canals was deficient and much below the average. Moreover, severe erosion set in close to the offtakes of the Taliri and the Karam Canals of the Chenab Series which resulted in the head of the former being choked up entirely towards the end of June and that of the latter being silted up heavily. In the Indus Series, the Magasson Canal was comparatively poorly supplied. The main stream of the river turned towards the west leaving shoals at the offtake of its feeding creek and almost choking it up.

The following statement gives the periods during which canals were in flow:—

Name of Canal.	DATES OF		Number of days canal was in flow.
	Opening.	Closing.	
<i>Indus Series.</i>			
Kot Sultan	1st May 1918	... 9th October 1918 ...	160
Magasson	5th May 1918	... 9th December 1918 ...	203
Maggi	5th May 1918	... 3rd December 1918 ...	191
Ghanta	6th May 1918	... Flowing	306
Puran	11th May 1918	... ditto.	294
Suleman	5th May 1918	... 1st November 1918 ..	179
<i>Chenab Series.</i>			
Karam	2nd June 1918	... 5th September 1918...	56
Ganesh	17th May 1918	... 18th September 1918	118
Taliri	15th May 1918	... 14th September 1918	105

Area irrigated—
Kharif, 1918.
Rabi, 1918-19.

5. The following statement compares the areas irrigated during 1918-19 with the averages of the previous two triennia and the figures of 1917-18:—

Crop.	AVERAGE OF 3 YEARS ENDING		AREA IRRIGATED DURING	
	1914-15.	1917-18.	1917-18.	1918-19.
Kharif	...	157,873	156,072	160,548
Rabi	...	222,043	230,904	224,527
Total	...	379,916	386,976	385,075
				-308,563

The decrease in the area irrigated was due to the absence of any rain of appreciable intensity and to low supply in the rivers, particularly the Chenab which could not give sufficient supply to the canals taking off from it and also to unprecedented short supply in the Taliri and the Karam Canals.

6. The total revenue collected amounted to Rs. 6,39,841 against Financial results based on collections—
Rabi, 1917-18.
Kharif, 1918.

Rs. 6,99,691 in 1917-18 and the working expenses to Rs. 3,41,092 against Rs. 3,35,243. The net revenue amounted to Rs. 2,98,749 against 3,64,448 in the preceding year.

The uncollected balance of assessment of occupier's rate amounted to Rs. 10,945 against Rs. 21,453 of last year.

7. The year was very unfavourable from an irrigation point of view, yet General remarks. owing to judicious distribution of the available supply results are better than might have been expected under the adverse conditions which prevailed. With a view to relieve the trying situation, some canals of the Indus Series, i.e., Ghuttu, Puran, and Maggi were opened during winter for rabi flushings which did immense good to rabi crops.

The Chenab river erosion necessitated the construction of new upper heads for the Karam and Taliri Canals, while a common upper head was constructed for the Kot Sultan and Magasson Canals due to the failure of the latter owing to the westward tendency of the river Indus.

No works of any magnitude could be undertaken owing to the necessity for economy arising from the war.

Prevalence of influenza resulted in some temporary dislocation of work during the year.

SHAHPUR (PROVINCIAL) INUNDATION CANALS.

(SUPERINTENDING ENGINEER—MR. W. P. SANGSTER.)

Capital Account—
Kharif, 1918.
Rabi, 1918-19.

1. No capital account is kept for these canals.

Extensions and Improvements.

2. No expenditure.

3. Rs. 15,926 were spent on the usual maintenance and repairs and on silt clearance as against Rs. 13,603 in Maintenance and Repairs.

4. The rainfall was 9.09 inches (kharif 6.49 inches and rabi 2.60 inches) against 26.48 inches in the previous year. Of the kharif rainfall 2.16 inches fell in April, 0.38 inches in June, 1.58 inches in July, 1.56 inches in August and 0.81 inches in September. The month of May was rainless. During rabi there was

Nature of season and state of demand and supply—
Kharif, 1918.

Rabi, 1918-19.

no rain in November whilst in October, December, January, February and March the rainfall aggregated to 2·6 inches only. Owing to failure of summer rainfall the demand for canal water was naturally very keen. The supply in the river was insufficient. The canals did not work satisfactorily during the year. The date of opening and closing the canals were as follows:—

		Opening.	Closing.
Raniwah	...	2nd May 1918	28th August 1918
Corbynwah	...	8th May 1918	1st September 1918
Area irrigated— Kharif, 1918. Rabi, 1918-19.			5. The area irrigated compares as follows with the averages of the two preceding triennia and with the figures of 1917-18:—

Season. —	AVERAGE OF 3 YEARS ENDING		AREA IRRIGATED DURING	
	1914-15.	1917-18	1917-18.	1918-19.
Kharif	20,060	8,700	14,988	10,229
Rabi	10,351	10,838	10,097	2,954
Total	31,011	25,128	25,085	13,183

(a) The figures for the triennium ending 1917-18 give a false idea of the relative areas of *kharif* and *rabi* irrigation owing to the *kharif* irrigation of grass having been, in part of that triennium, incorrectly transferred to the *rabi khatauni*. This incorrect practice has now ceased, but it will necessarily vitiate the triennial averages for *kharif* and *rabi* for some years.

(b) The area successfully matured and assessed was 12,021 acres as against 23,708 acres of the preceding triennium. The decrease is due to unfavourable conditions of the river and failure of timely rainfall during the year.

(c) Revenue was remitted on 119 acres for short supply and 369 acres for bad germination. Besides this 674 acres were also remitted under Tenancy Rules.

*Financial results based on collections—
Rabi, 1917-18.
Kharif, 1918.

6. The gross revenue realized amounted to Rs. 41,614. Details compare as follows with the averages of the previous triennium:—

Details.	Average for 3 years ending 1917-18.	Year 1918-19.
Total assessments (Direct and Indirect)	51,714	17,183
Receipts (Direct and Indirect)	50,086	41,614
Working Expenses	45,300	39,019
Net Revenue	4,096	2,595

There was a net profit of Rs. 2,595 on the year's working which is partly due to curtailment of expenditure on maintenance and repairs and partly to adjustment of Establishment charges proportionately according to works outlay instead of the fixed amount of Rs. 24,000 per annum.

General remarks. 7. (a) Designs for linking up the Raniwah Canal with the Shahpur Branch are in hand.

(b) Corbynwah is a small channel which irrigates principally pasture land, most of which is free from assessment.

SIMLA : } F. W. WOODS,
The 9th October 1919. } Chief Engineer, Irrigation Works, Punjab.

GOVERNMENT OF THE PUNJAB.
PUBLIC WORKS DEPARTMENT.

IRRIGATION BRANCH.

Part II.

STATISTICAL STATEMENTS FOR THE YEAR 1918-19.

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STATEMENT OF CANALS

MAJOR IRRIGATION

PARTICULARS.		Western Jumna Canal including Sirsa Branch, British and Patiala.	SIRHIND CANAL.		Upper Ravi Canal.	Lower Rari Canal.	Deab Canal.	Upper Chenab Canal.	Lower Chenab Canal.
			British.	Patiala, Nahan and Jind States.					
1	2	3	4	5	6	7	8		
Source of supply	...	Jumna.	Sutlej.	Ravi.	Ravi and Chenab.	Chenab.		Chenab.	
Minimum discharge of river.	Ever recorded, cubic feet per second.	2,167	2,780	...	1,273	3,884		3,584	
During the year	" "	2,441	3,585	...	2,420	4,800		3,254	
Maximum discharge of canal.	As designed	6,178	9,910	2,160	5,000	6,750	11,742	8,313	
Now authorized	" "	6,430	5,461	8,050	6,700	6,750	11,674	10,730	
During the year	" "	5,820	6,407	...	6,699	5,181	12,260	16,760	
Average annual rainfall	... Inches	(a) 40.32	(b) 17.20	(b) 18.74	(a) 24.48	(b) 10.67	(c) 11.5	(c) 13.14	
Gross area commanded	... Acres	2,735,268	2,571,005	1,054,560	1,782,660	1,612,720	3,884,367		
Culturable area commanded	... "	2,816,077	2,273,467	1,029,000	1,591,346	1,379,951	1,582,112	2,680,566	
Area proposed to be irrigated annually.	By complete project	603,565	764,511	420,070	821,665	877,009	648,307	1,500,000	
At present	" "	893,555	750,000	420,000	821,005	910,071	658,291	1,726,190	
Sanctioned Estimate—									
Direct charges	... Re.	1,05,54,269	2,29,18,909	1,44,07,175	1,57,23,565	2,10,63,910	3,61,31,593	2,50,84,175	
Indirect charges	" "	7,50,277	12,73,120	...	...	6,54,482	12,25,411	8,31,781	
Interest during construction	" "	34,27,795	57,03,620	...	...	34,29,947	71,03,569	66,50,977	
Total Estimate	" "	1,47,32,841	3,93,03,745	1,44,67,175	1,57,23,565	2,57,68,310	4,44,00,692	3,31,66,243	
Expenditure to end of 1918-19.	Direct charges	1,60,62,032	2,14,76,635	1,38,22,486	2,10,68,132	2,31,70,812	3,47,71,692	3,17,16,845	
Indirect charges	" "	8,10,052	12,12,220	...	7,08,620	4,77,637	8,97,675	7,70,871	
Interest during construction.	" "	32,09,064	65,45,401	...	1,01,97,038	39,00,049	53,09,216	64,52,313	
Total Expenditure	" "	9,20,81,126	3,42,31,255	1,43,22,438	3,88,03,800	2,65,40,818	4,40,78,783	3,69,48,529	
Works as now sanctioned—									
Main Canals, irrigation	... Miles	62	80	80	132	173	40		
Branch Canals	" "	243	270	210	295			287	
Branch Feeder Canals	" "	...	...	...	16	...	...	...
Lower Chautang Nala Canal	" "	4	...	...	...	...	...	...
Distributaries, irrigation	" "	1,846	1,593	1,810	1,541	1,167	1,177	2,245	
Lower Chautang Nala Canal Distributaries	" "	45	...	...	...	...	...	...
Of above—									
Navigable Channels	" "	121	92	46	...	...	...	...
Works completed to end of 1918-19—									
Main Canals, Irrigation	" "	82	80	80	132	173	40	60	
Branch Canals	" "	243	270	210	295			587	
Branch Feeder Canals	" "	...	...	...	16	...	...	...
Lower Chautang Nala Canal	" "	4	...	...	...	...	...	...
Distributaries, irrigation	" "	1,846	1,593	1,810	1,541	1,165	1,175	2,245	
Lower Chautang Nala Canal Distributaries	" "	45	...	...	...	...	...	...
Of above—									
Navigable Channels	" "	121	92	46	...	...	...	...

NOTE.—Miles shown in this statement

*Salampur and

+Includes 4 miles

(a) Average rainfall for the last 40 years

(b) Ditto ditto 35 do.

(c) Ditto ditto 29 do.

(d) Ditto ditto 17 do.

(e) Ditto ditto 13 do.

IN THE PUNJAB.

WORKS.

MINOR IRRIGATION WORKS.

Upper Jhelum Canal.	Lower Jhelum Canal.	Upper Sutlej Canals.	Sidhuani Canals.	Indus Inundation Canals.	Shakarpur (Imperial) Inundation Canals.	GHAGGAR INUNDATION CANALS.	Lower Sutlej Inundation Canals.	Chenab Inundation Canals.	Muzaffargarh Inundation Canals.	Shakarpur (Provincial) Inundation Canals.	
9	10	11	12	13	14	British.	Bikaner State.	17	18	19	20
Jhelum.	Jhelum.	Sutlej.	Ravi	Indus.	Jhelum.	Ghaggar.	Sutlej.	Chenab.	Indus Chonab	Jhelum.	
4,514	...	8,001	...	9,439	...	...	...	2,580	808	808	...
6,446	400	8,380	...	23,420	400	...	...	4,430	1,785	...	400
8,500	8,800	4,085	2,120	...	1,100	1,000	500	5,555	5,108	7,684	933
...	8,750	...	2,605	...	1,100	1,410	556	...	...	...	982
8,511	3,044	9,378	2,899	5,812	583	1,028	323	5,800	4,169	9,713	682
15.07	(2) 12.46	(f) 10.30	(g) 6.98	(h) 5.68	(g) 14.73	(i) 10.99	(j) 13.84	(k) 5.68	(l) 6.29	(m) 5.53	(n) 14.04
593,680	1,869,398	989,730	380,977	879,108	67,007	80,321	44,904	918,208	458,473	771,311	80,928
563,006	1,162,465	699,836	844,169	422,823	62,954	72,978	34,618	905,152	860,918	674,932	68,255
310,830	668,921	840,897	160,000	305,780	47,750	40,531	17,809	250,000	200,000	350,000	27,000
310,830	668,921	829,184	150,000	305,780	42,000	46,834	17,809	250,000	200,000	350,000	24,170
4,32,40,292	1,83,95,782	13,30,378	9,62,383	6,87,908	2,05,988	8,65,092	3,07,305	...	...	...	...
10,56,277	5,83,208	46,400	37,092	10,229	9,981	10,028	...	...	...	...	...
78,30,746	32,98,554	...	89,086	...	...	...	...	...	...	...	...
5,16,17,305	2,82,02,542	13,82,778	10,38,561	7,07,685	2,15,914	8,69,523	3,07,305	...	...	...	...
4,10,87,521	1,62,68,381	17,11,255	12,90,449	29,01,860	2,14,680	3,68,407	2,86,186	...	...	...	...
9,12,453	4,08,698	1,01,041	40,225	80,885	10,931	10,690	...	...	...	...	...
85,23,443	88,63,714	8,87,000	2,12,511	6,86,207	...	...	...	...	...	...	...
5,35,23,416	2,50,41,293	26,99,386	15,43,156	36,67,052	2,25,021	3,79,297	2,86,186	...	...	...	...
488	89	829	68	443	53	44	53	402	266	419	88
40	191	...	...	...	18	...	...	...	...	...	18
...
...
886	1,011	395	255	801	72	34	...	804	64	725	52
...
...
488	89	830	68	443	58	41	58	402	266	419	87
40	156	...	...	...	18	...	...	...	...	...	13
...
696	958	905	255	801	72	34	...	804	64	725	52
...
...

one canal miles of 5,000 feet.

Faridnagar Channels.

or Bhimber diversion.

(f) Average rainfall for the last 20 years.

(g) " Ditto ditto 30 do.

(h) " Ditto ditto 52 do.

(i) " Ditto ditto 20 do.

(j) " Ditto ditto 16 do.

(k) " Ditto ditto 9 do.

I.B.

CAPITAL ACCOUNT OF THE IRRIGATION WORKS IN THE PUNJAB PROVINCE FOR, AND
TO END OF, 1918-19.

	DIRECT CHARGES (NET EXPENDITURE).					Indirect charges exclusive of interest.	Total charges excluding interest.	Simple interest.
	Works.	Establish- ment.	Tools and Plants.	Suspense.	Total.			
	1	2	3	4	5	6	7	8
49—CAPITAL EXPENDITURE ON IRRIGATION WORKS NOT CHARGED TO REVENUE.								
Western Jutba	To end of previous year ...	1,31,27,036	33,24,32	2,17,020	2,13,010	1,69,22,312	8,10,217	1,78,02,523
Canal	Including { Sirsa Branch.	During the year ...	— 3,057	— 60	23,801	10,202	— 135	10,167
Sirhind Canal	To end of previous year ...	1,74,46,002	40,32,71	21,06,093	2,30,217	2,44,16,210	12,12,161	2,50,31,883
	During the year ...	— 2,245	43	31	54,643	67,400	68	67,174
Upper Sarsif Doab	To end of previous year ...	1,63,70,641	34,03,83	0,26,321	4,26,477	2,10,01,018	7,39,255	2,18,73,233
Canal.	During the year ...	— 7,533	2,0	140	6,63,833	6,51,114	885	6,51,179
Lower Sarsif Doab	To end of previous year ...	1,61,63,813	30,99,114	10,46,701	7,47,819	2,10,01,018	4,60,503	2,81,61,550
Canal,	During the year ...	— 1,87,159	61,761	6,019	— 77,137	1,75,927	6,832	1,74,013
Upper Canal.	Chenab	To end of previous year ...	2,73,37,500	145,47,002	21,02,027	8,12,478	8,47,78,646	9,37,78,600
	During the year ...	— 60,230	16,110	543	— 71,010	— 8,151	2,116	— 8,030
Lower Canal.	Chenab	To end of previous year ...	2,53,53,673	48,35,136	6,41,661	4,10,568	8,17,70,470	7,70,183
	During the year ...	— 5,777	1,702	67	— 29,020	— 22,794	250	— 22,875
Upper Canal.	Jhelum	To end of previous year ...	3,80,01,827	40,30,418	49,19,800	6,41,004	4,11,65,890	8,61,033
	During the year ...	— 70,877	1,31,245	— 391	— 1,31,334	— 69,320	33,510	— 37,510
Lower Canal.	Jhelum	To end of previous year ...	1,23,60,466	22,10,418	8,61,220	3,07,470	1,18,32,270	3,02,423
	During the year ...	— 2,72,304	1,16,193	11,493	80,416	4,10,211	16,230	4,58,450
Upper Sutlej Inun- dation Canals.	To end of previous year ...	13,70,005	2,05,108	21,637	20,301	17,10,283	1,01,411	— 18,17,843
	During the year ...	— ...	... ...	...	— 5,027	— 5,027	...	— 5,027
Sidhu Inundation Canals.	To end of previous year ...	9,45,698	2,61,017	89,020	44,258	12,02,003	40,225	13,32,557
	During the year ...	— ...	... ...	...	— 1,553	— 1,553	...	— 1,553
Indus Inundation Canals.	To end of previous year ...	23,52,761	4,58,118	25,083	57,388	29,03,335	50,593	29,80,773
	During the year ...	— 567	— 00	— 3	1,005	1,005	— 13	993
Total	To end of previous year ...	18,73,02,970	3,20,67,820	1,30,05,619	43,40,145	21,08,07,018	81,98,146	22,83,05,164
	During the year ...	— 4,50,557	8,30,854	15,813	8,80,015	11,46,178	58,210	12,08,387
CONSTRUCTION.								
Western Canal, Branch.	Jumna	To end of previous year ...	8,02,168	2,83,543	23,763	...	11,60,478	11,60,478
	Sirsa	During the year ...	...	...	...	...	...	...
	To end of previous year ...	— 67,43,693	33,71,073	12,01,501	...	1,43,21,257	103	1,43,31,300
Sirhind Canal	...	During the year	Patiala ...	275	200	11	...	290
			Nabha ...	62	21	1	...	101
			Jind ...	70	18	1	...	59
Total	To end of previous year ...	1,08,48,851	30,07,615	12,23,269	...	1,54,81,785	103	1,54,81,859
	During the year ...	— 927	230	13	...	1,170	...	1,170
48—MINOR WORKS AND NAVIGATION.								
Shahpur Canal	To end of previous year ...	1,75,060	80,280	613	...	2,05,033	9,931	2,15,014
	During the year ...	— 10	8,008	8,403	273	...	8,757	850
Ghaggar Imperial. Canal	To end of previous year ...	2,01,610	62,602	7,023	...	3,03,585	10,703	3,73,157
	During the year ...	— 2,303	700	34	...	3,04,012	98	3,140
Ghaggar Canal Contribution.	To end of previous year ...	2,38,631	44,280	2,034	...	2,65,454	...	2,65,154
	During the year ...	— 576	147	9	...	732	...	732
Total, Im- perial.	To end of previous year ...	4,66,700	93,002	8,636	...	5,71,203	20,773	5,92,071
	During the year ...	— 8,305	3,204	287	...	11,793	645	— 31,709
Total, Con- tribution.	To end of previous year ...	2,35,634	44,266	2,634	...	2,65,456	...	2,65,451
	During the year ...	— 876	147	0	...	732	...	732
Jalalpur Canal	To end of previous year ...	28,079	10,521	8,001	...	51,004	2,706	53,709
	During the year ...	— ...	... ...	...	...	...	721	...

I C.

STATEMENT SHOWING THE FINANCIAL RESULTS OF THE IRRIGATION WORKS IN
THE PUNJAB PROVINCE FOR THE YEAR ENDING 31ST MARCH 1919,

I

STATEMENT SHOWING THE FINANCIAL RESULTS OF THE IRRIGATION
REALIZATIONS UNDER THE MINOR HEADS OF

IRRIGATION.	REVENUE (ACTUAL RECEIPTS).											
	IRRIGATION.				Navigation.				Plantation.			
	Water rates directly paid.	Share of land revenue and salaries/fees of waste and other heads.	Owns' rates.	Total.					Water power.	Miscellaneous.	Total.	
1	2	3	4	5	6	7	8	9	10	11	12	Gross receipts less refunds.
PROMOTIVE WORKS.												
IMPERIAL.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Western Jumna Canal	24,90,630	2,18,741	...	27,15,371	66,117	59,563	4,053	53,603	25,76,072	916	25,76,164	
Sirhind Canal	24,76,810	69,495	...	25,75,700	11,418	33,061	1,32,319	1,13,407	28,69,801	3,053	28,67,718	
Upper Barri Doab Canal	37,62,367	6,67,188	...	44,30,555	...	37,440	1,23,819	5,08,689	51,09,534	3,111	51,00,423	
Lower Barri Doab Canal	21,00,720	24,80,522	...	45,67,242	...	6,492	...	1,00,380	48,01,100	281	48,03,839	
Upper Chenab Canal	18,30,024	1,10,140	...	19,40,173	...	490	...	38,557	19,89,220	885	19,87,335	
Lower Chenab Canal	58,37,118	78,80,163	...	1,05,17,301	817	29,457	16,084	61,639	1,68,21,518	601	1,68,21,247	
Upper Jhelum Canal	7,87,071	...	...	7,87,071	...	1,105	...	41,467	8,00,648	38	8,00,505	
Lower Jhelum Canal	28,17,774	15,94,163	...	42,11,036	...	6,915	31,159	27,812	42,77,211	140	42,77,101	
Upper Sutlej Inundation Canals	5,41,947	2,68,150	...	8,30,097	...	2,229	...	6,766	8,41,936	177	8,40,009	
Sidhu Inundation Canals	6,05,031	2,02,363	45	8,07,472	...	1,026	...	2,650	8,11,049	25	8,11,023	
Indus Inundation Canals	1,11,304	2,39,273	...	3,49,737	...	3,020	...	86,033	4,20,700	...	4,20,700	
Total	2,61,26,385	1,30,01,267	+45	3,07,39,677	57,852	1,64,506	3,07,356	10,12,782	4,13,23,163	6,341	4,13,14,012	
CONTRIBUTION.												
Western Jumna Canal	2,01,900	...	...	2,04,900	...	534	238	4,360	(e) 3,00,059	2	8,00,057	
Sirhind Canal	18,61,010	...	...	18,64,010	6,473	16,402	57,067	30,007	10,60,580	4,452	10,70,107	
Total	21,63,910	...	...	21,65,010	6,473	10,936	57,303	40,000	22,20,043	4,454	22,70,104	
WORKS FOR WHICH ONLY REVENUE ACCOUNTS ARE KEPT.												
CANALS IN OPERATION.												
Lower Sutlej Inundation Canal	2,55,479	2,77,755	...	5,33,234	...	1,987	...	1,783	5,36,714	75	5,36,639	
Chenab Inundation Canals	1,07,912	2,68,745	...	4,64,987	...	8,716	...	2,359	4,77,762	124	4,77,639	
Muzaffargarh Inundation Canals	2,60,587	3,71,778	...	6,31,305	...	6,543	...	2,213	6,40,121	280	6,39,941	
Total	7,12,078	9,18,273	...	10,31,236	...	16,916	...	9,305	10,54,607	479	10,54,118	
WORKS FOR WHICH CAPITAL AND REVENUE ACCOUNTS ARE KEPT.												
Shahpur Canal	61,470	20,618	...	82,007	...	...	...	...	82,007	...	82,007	
Gaggar Canal	12,277	...	...	12,277	...	...	...	...	12,277	...	12,277	
Contribution	2,003	...	...	2,003	...	...	...	...	201	(f) 2,204	...	2,204
Total	73,756	20,618	...	94,374	...	...	...	...	94,374	...	94,374	
PROVINCIAL.												
Shahpur Canal	29,454	12,130	...	41,614	...	...	...	...	41,614	...	41,614	
Rari Inundation Canals	...	...	...	...	...	...	...	...	...	...	...
Total	29,454	12,130	...	41,614	...	57	...	...	41,614	...	41,614	

(a) Includes Rs. 1,282 credited to Patiala State through

(b) and (c) Include Rs. 20,037 and Rs. 37,600 respectively

(d) Includes Rs. 61,457 passed through the Administrative

(e) Includes Rs. 3,14,754, Rs. 87,907 and Rs. 36,424 spent

(f) These figures have been reported by the Bikaner State.

(g) Includes Rs. 2,383 spent by the Bikaner State.

(h) " Rs. 3,622 spent by the Bikaner State.

7

WORKS IN THE PUNJAB PROVINCE FOR THE YEAR ENDING 31st MARCH 1919.
REVENUE AND WORKING EXPENSES.

MAINTENANCE OF WORKS.																			
ESTABLISHMENT REVENUE.						ESTABLISHMENT.							Total cost of maintenance.			Grand Total Working Expenses.			
Direction.	Executive.	Migration.	Civil Officers.	Total.	Direction.	Executive.	Medical.	Total.	Works.	Repairs.	Supplies.	Tools and Plant.	Plantation.	Total direct charges.	Indirect charges.	Total	Net Revenue.		
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
—	4,08,320	—	27,491	4,35,751	—	1,70,361	—	1,50,341	94,740	5,23,463	1,370	9,470	10,920	7,87,393	12,50,110	85,293	13,41,647	16,88,707	
—	3,02,474	—	83,215	4,75,710	—	92,781	—	92,781	80,720	4,20,615	17	9,463	21,512	6,21,637	11,40,356	61,512	11,91,498	16,85,813	
—	4,62,910	—	87,072	5,13,912	—	83,161	—	83,161	79,721	4,68,445	—	10,920	30,116	6,77,012	12,32,024	80,355	13,22,309	87,84,114	
—	3,79,770	—	63,401	4,13,151	—	1,11,787	—	1,11,787	85,076	4,10,210	—	11,162	57,017	6,92,827	10,93,121	78,763	11,71,001	16,21,095	
—	3,11,672	—	60,124	3,04,978	—	1,49,104	—	1,49,104	51,052	6,01,009	6,370	6,347	51,102	6,14,789	12,02,174	76,822	12,69,000	2,00,833	
—	7,82,109	—	5,39,740	10,91,012	—	1,10,716	—	1,10,716	1,74,770	8,10,601	21	10,729	52,121	11,78,175	22,13,157	1,61,410	23,74,976	1,42,47,271	
—	2,03,812	—	21,762	2,01,814	—	1,31,035	—	1,31,035	50,761	5,51,915	—	—	12,730	4,31,854	6,64,093	22,037	7,87,643	62,560	
—	3,12,835	—	71,021	4,14,273	—	44,931	—	44,931	49,721	55,207	2,67,276	372	13,700	6,914	3,81,120	7,05,400	61,826	84,16,693	
—	1,21,510	—	14,147	3,47,760	—	45,924	—	45,924	10,716	1,52,479	—	—	3,316	10,785	2,23,503	3,86,120	16,599	3,20,397	4,61,612
—	21,626	—	6,914	30,740	—	5,020	—	5,020	2,759	5,113	34,164	—	459	4,277	23,395	60,126	5,633	21,789	7,10,133
—	62,157	—	5,475	27,625	—	47,813	—	47,813	25,773	1,13,079	—	1,487	6,023	1,58,212	2,51,831	16,703	2,70,550	1,69,904	
—	37,47,767	—	6,15,161	42,41,749	—	8,87,635	—	8,87,635	6,92,417	47,71,103	6,070	70,723	2,53,020	10,47,128	10,202,078	7,21,763	1,10,11,431	3,00,03,511	
—	213	—	—	226	—	(1)	—	27,221	10,775	(2)	93	657	—	1,03,745	1,02,061	—	1,02,061	1,97,170	
—	21,710	—	—	21,710	—	1,03,225	—	1,03,225	75,929	5,48,130	912	6,374	6,457	7,23,051	7,71,707	—	7,71,707	12,03,549	
—	21,610	—	—	2,610	—	1,73,180	—	1,73,180	35,718	8,03,772	D13	6,721	6,457	6,59,720	6,76,649	—	6,78,319	13,07,010	
—	62,743	—	7,217	20,709	—	10,518	—	10,518	1,05,020	63,537	2,781	1,829	2,573	2,15,750	3,33,667	18,270	3,11,627	1,01,712	
—	61,633	—	—	51,611	—	31,076	—	31,076	6,141	27,714	70	699	6,000	1,13,020	1,12,251	10,293	1,75,617	3,02,111	
—	62,711	—	6,417	29,153	—	10,723	—	10,723	21,701	1,83,031	-1,029	1,451	12,535	2,43,749	3,31,947	10,185	3,31,000	2,98,710	
—	1,46,021	—	16,662	2,03,07	—	1,45,722	—	1,45,722	1,73,104	2,14,217	042	4,672	21,478	6,13,211	8,13,008	47,674	8,01,616	7,92,572	
—	26486	—	1,027	25,612	—	0,410	—	0,410	9,850	16	25,649	—	1,791	—	36,652	20,361	1,610	61,010	18,097
—	7,212	—	263	7,140	—	0,031	—	0,031	9,010	8,109	0,109	—	100	0	11,003	10,208	1,493	20,701	—8,014
—	—	—	—	—	—	(2)	—	2,011	8,011	6,010	—	81	—	8,010	8,310	—	8,310	—8,025	
—	29,256	—	1,004	20,212	—	12,567	—	12,567	8,114	32,205	—	1,917	0	43,820	78,762	6,033	61,631	8,073	
—	—	—	—	—	—	9,011	—	9,011	622	8,010	—	81	—	8,310	8,310	—	8,310	—6,031	
—	12,061	—	700	12,747	—	0,951	—	0,951	—	18,049	—	171	—	21,371	30,205	2,751	30,018	2,005	
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
—	12,051	—	700	12,747	—	0,951	—	0,951	—	16,628	—	671	—	21,373	30,205	2,751	30,018	2,005	

The Administrative Accounts of the Province,
spent by the Rallian Fazil on maintenance of State channels.
Accounts of the Province.
By the Native States of Patiala, Nabha and Jind, respectively.

STATEMENT SHOWING THE FINANCIAL RESULTS OF IRRIGATION

No. of work.	Name of works.	GENERAL FINANCIAL RESULTS TO END OF 1918-19.									
		Mileage in operation.		Estimated cost of construction (direct and indirect).	Date of completion of work (P. W.D. Code, 11, 1918).	Date when the system first came into operation.	Total capital outlay (direct and indirect).	Accumulated arrears of interest.	Accumulated revenues.	Surplus	Total (column 7 + column 8).
		Main Canals and Branches.	Distributaries.								
1	2	3	4	5	6	6	7	8	9	10	
MAJOR WORKS.											
PRODUCTIVE WORKS.											
1	Western Jumna Canal including Sirsa Branch.	294	1,740	1,74,75,813 (a)	1896 Sirsa Branch 1891	1820	1,77,11,686	...	6,51,00,023	1,77,11,686	
2	Sirhind Canal	318	1,693	2,44,79,292	1886-87	1833-84	2,56,88,854	...	2,00,76,781	2,56,88,854	
3	Upper Barid Doab Canal.	325	1,557	2,16,97,216	1878-79	1860-61	2,39,06,763	...	5,16,44,820	2,39,06,763	
4	Lower Barid Doab Canal.	132	1,165	2,17,89,783	31st March 1917	1918-14	2,26,46,100	8,07,025	...	2,84,54,124	
5	Upper Chenab Canal	173	1,175	3,51,44,803	31st March 1917	1912-13	3,57,00,567	66,40,263	...	4,24,16,830	
6	Lower Chenab Canal	427	2,245	8,20,30,700	1899-1900	*	8,24,06,210	...	15,10,90,744	8,24,06,316	
7	Upper Jhelum Canal	128	636	4,30,23,220	31st March 1917	1915-16	4,49,99,978	1,20,93,057	...	5,70,93,030	
8	Lower Jhelum Canal	195	993	1,65,04,284	31st March 1917 Upper Sutlej 1853-59	1901	1,65,77,570	...	2,29,44,900	1,66,77,570	
9	Upper Sutlej Inundation Canals.	880	995	17,07,010	Lower Sutlej and Panj 1895-96 1896	1855 1894	(a) 18,12,298	...	39,53,301	18,12,296	
10	Sidhmaj Canals	68	255	12,87,989	1858 Prior to 1849	1858	18,30,674	...	74,93,730	13,30,074	
11	Indus Irrigation Canals.	443	301	20,22,682	1810-50	20,81,745	7,07,027	...	80,83,772		
	Total	...	2,638	12,050	22,04,82,278	...	22,45,11,561	2,06,54,272	31,30,63,207	24,53,55,823	
CONTRIBUTIONS.											
12	Western Jumna Canal	85	151	11,60,478	...	...	11,60,478	...	...	11,60,478	
13	Sirhind Canal	219	1,810	1,43,18,817	...	...	1,43,22,436	...	...	1,43,22,436	
	Total	...	234	1,961	1,54,79,295	...	1,54,82,914	...	...	1,54,82,914	
WORKS FOR WHICH CAPITAL AND REVENUE ACCOUNTS ARE KEPT.											
14	Shahpur Canal	60	72	2,26,021	1870-71	1870	2,26,021	...	12,09,950	2,26,021	
15	Ghaggar { Imperial Canal Contribution,	44	34	3,80,478	1893-99	1897	3,81,754	11,21,699	...	15,00,453	
	Total { Imperial Contribution	53	...	2,85,442	...	...	2,86,186	...	...	2,86,186	
		110	106	6,05,499	...	...	6,00,776	11,21,699	12,09,950	17,31,474	
		53	...	2,85,442	...	...	2,86,186	...	...	2,86,186	
WORKS FOR WHICH ONLY REVENUE ACCOUNTS ARE KEPT.											
16	Lower Sutlej Inundation Canals.	402	304	...	1895	Were in operation prior to annexation of the Panjab by the British.	...	...	81,23,847	...	
17	Chenab Inundation Canals.	206	64	...	1895		...	...	75,90,931	...	
18	Muzaffargarh Inundation Canals.	619	725	...	1896		...	...	85,90,506	...	
	Total	...	1,087	1,093	...	...	...	...	2,48,09,784	...	
Provincial.											
19	Shahpur Canal	55	52	...	...	...	...	...	2,78,251	...	
20	Ravi Canal	...	...	...	...	...	...	...	...	...
	Total	...	55	52	...	...	...	...	3,76,251	...	

*Opened as an Inundation Canal in 1887 and as a Perennial Canal in 1892.
(a) Includes 4 miles and (b) 45 miles of the Lower Chautang Nullah Canal.

C.

WORKS FOR, AND UP TO THE END OF, 1918-19.

FINANCIAL RESULTS OF THIS YEAR 1918-19.										
Gross receipts (direct and indirect). -	Working expenses (direct and indirect).	Net Revenue.	Per centage on Capital outlay, column 7.	Percentage on sum-at-charge, column 10.	Interest at 5% per cent. on the direct Capital outlay to end of the previous year plus half the outlay of this year.		Net profit.	Net loss.	Area irrigated.	Percentage of working expenses to receipts (column 11 to column 12).
11	12	13	14	15	16	17	18	19	20	
Rs.	Rs.	Rs.	%	%	Rs.	Rs.	Rs.	Acres.	%	
28,75,151	13,61,447	15,13,707	5.66	8.60	5,98,113	9,46,503	...	6,39,693	40.65	
25,67,710	11,61,938	16,95,843	6.58	6.56	8,51,223	8,31,020	...	8,87,875	41.21	
51,00,423	13,82,369	37,81,114	10.69	10.49	7,44,273	30,50,811	...	10,65,040	25.80	
60,93,639	11,71,591	35,21,935	13.55	13.01	7,68,893	27,53,033	...	6,76,004	24.08	
19,87,335	12,50,936	7,00,330	1.97	1.08	12,10,823	...	5,04,434	4,30,861	6.15	
1,36,21,247	23,71,976	1,42,49,271	43.85	43.83	11,01,710	1,31,44,501	...	23,30,193	14.28	
8,00,503	7,37,617	62,860	14	10	15,38,223	...	14,73,380	2,40,000	92.11	
42,77,101	8,60,215	31,16,950	20.49	20.49	6,59,956	28,59,030	...	7,77,493	20.11	
6,40,860	3,76,397	4,61,612	25.03	25.63	60,670	4,01,612	...	2,69,499	41.70	
8,11,023	65,758	7,16,135	53.62	53.82	41,939	6,71,177	...	2,26,307	11.79	
6,29,703	2,70,930	1,59,904	5.33	4.80	1,01,002	67,902	...	1,81,087	68.02	
						2,47,03,689	10,77,933			
6,10,14,912	1,10,14,431	3,09,00,611	13.60	12.34	75,68,776			77,46,953	20.05	
							2,27,31,736			
1,282	61,184	-69,912	-5.16	-5.16	...	...	69,912	61,697	4,773.32	
81,017	3,36,553	-2,62,503	-1.76	-1.76	...	...	2,62,503	5,37,526	400.13	
85,328	3,97,716	-3,12,117	-2.02	-2.02	...	...	3,12,117	5,99,103	453.12	
82,007	64,010	18,097	8.04	8.04	7,028	10,784	...	16,727	77.36	
12,277	20,791	-8,514	2.21	1.56	12,774	...	21,268	11,473	169.85	
...	2,868	-3,859	.99	.99	...	...	2,869	1,315	...	
84,374	64,801	9,573	1.67	.66	20,097	10,764	21,258	29,100	63.86	
							10,624			
"	2,869	-2,859	.99	.99	...	...	2,860	1,343	...	
5,99,630	3,44,927	1,91,713	...	...	...	1,91,712	...	1,69,910	64.27	
4,77,639	1,76,627	8,02,111	...	...	...	8,02,111	...	1,26,629	36.74	
6,30,841	3,41,092	2,08,740	...	...	...	2,08,740	...	3,08,663	58.80	
16,54,118	8,61,640	7,02,672	...	...	...	7,02,672	...	6,35,708	52.08	
41,014	39,019	2,605	...	...	...	2,605	...	19,183	93.76	
"	
41,014	39,019	2,605	...	...	...	2,605	...	19,183	93.76	

III C.

**STATEMENT SHOWING DEMANDS AND REALIZATIONS IN THE PUNJAB PROVINCE
FOR THE YEAR 1918-19.**

Name of Canal.	Balance of demands remaining unrealized at the commencement of the year.	Demands during the year.	Total.	Reflected demands not including cash refunds.	No. amount.	Realizations.	Amount unrealized at the close of the year.	
1	2	3	4	5	6	7	8	
XXIX—MAJOR WORKS—DIRECT REVENUE.								
<i>Water or occupier's rates.</i>								
Western Jumna Canal ...	... 78,761	25,70,564	26,49,003	1,41,510	21,01,524	21,02,530	8,196
Sirhind Canal ...	... 38,610	24,32,807	20,71,436	43,124	23,27,022	23,27,310	1,22,625
Upper Beiri Doab Canal ...	... 36,471	33,00,070	33,23,560	61,237	37,95,523	37,95,527	49,286
Lower Beiri Doab Canal ...	... 1,692	23,00,080	23,00,082	2,63,077	21,01,955	21,00,712	4,219
Upper Chenab Canal ...	... 1,68,189	18,52,124	19,10,267	1,21,170	18,63,507	19,00,021	35,763
Lower Chenab Canal ...	... 8,673	8,50,117	83,70,416	70,154	85,38,631	85,37,118	1,616
Upper Jhelum Canal ...	... 1,163	7,67,163	7,67,163	6,127	7,53,421	7,57,071	—1,250
Lower Jhelum Canal ...	... 6,157	26,10,359	26,26,515	603	23,25,570	23,17,574	7,976
Upper Sutlej Inundation Canals ...	... 7,463	6,70,452	6,70,457	61,978	5,10,659	5,11,911	1,612
Sindhu Inundation Canals ...	... 1,277	6,05,359	6,05,635	19	6,00,716	6,03,031	1,624
Bidas Inundation Canals ...	... 32,225	1,93,233	2,22,479	64	2,22,391	(a) 1,92,551	13,546
Total	... 8,31,455	2,08,52,282	2,71,72,737	6,41,575	2,64,88,551	2,62,07,111	2,51,430	
<i>Orienter's rates.</i>								
Lower Chenab Canal ...	... ..	7,510	7,510	..	7,510	7,510	...
XXX—MINOR WORKS AND NAVIGATION.								
<i>(Imperial.)</i>								
Lower Sutlej Inundation Canals ...	... 932	2,31,712	2,31,711	375	2,35,186	2,31,150	1,129
Mussafarghat Inundation Canals ...	... 21,453	2,43,213	2,70,393	164	2,70,632	2,39,537	10,915
Chenab Inundation Canals ...	... 5,176	1,95,011	2,00,217	103	2,10,110	1,97,012	2,197
Hajjiwah Canals ...	... ..	21,402	21,455	...	21,436	21,333	123
Shahpur Canal	—1	61,714	61,713	269	61,441	61,479	—36
Ghaggar Canal	13,561	18,531	1,273	12,277	12,277	...
Total	... 27,614	7,75,063	8,00,277	2,193	8,01,684	7,66,764	14,230	
Shahpur Canal	65	20,322	30,197	858	20,519	20,484	65
Namal Dam Canal	98	41,255	41,253	...	41,253	41,253	8
Total	... 116	74,577	74,603	856	75,637	75,709	69	

(a) Includes Rs. 81,086 on account of Dhani.

IV C.

STATEMENT SHOWING THE FINANCIAL RESULTS OF THE IRRIGATION WORKS IN THE PUNJAB PROVINCE FOR THE YEAR 1918-19 BASED ON ASSESSMENT OF THE YEAR 1918-19 AND FINANCIAL RESULTS OF THE OPERATIONS FOR THE YEAR ENDING 31ST MARCH 1919.

IRRIGATION WORKS.	Capital outlay Direct and Indirect to end of the year 1918-19.	REVENUE ASSESSED DURING THE YEAR.										Working expenses, Direct and Indirect.	Net mensal Revenue of the year.	Percentage on Capital outlay to end of the year.
		DIRECT ASSESSED RECEIPTS.												
		Occupiers' rates.	Owner's rate.	Plantation.	Water power.	Navigaton.	Miscellaneous.	Total.	Indirect receipts.	Grand Total.	13	14	15	
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	
PRODUCTIVE WORKS.														
IMPERIAL.														
Western Jumna Canal	... 1,77,11,690	26,78,675	...	30,663	4,063	66,117	53,653	29,89,078	2,16,741	30,59,417	19,41,417	17,16,870	9.60	
Rohind Canal	... 2,46,68,656	36,78,961	...	39,961	1,32,210	11,414	1,13,407	39,76,068	69,486	50,74,452	11,81,209	28,02,581	11.29	
Upper Darl Doab Canal	... 2,23,03,702	37,67,150	...	37,110	1,23,812	...	8,08,789	41,27,198	8,87,183	51,14,326	13,22,309	37,92,017	16.03	
Lower Darl Doab Canal	... 3,33,46,100	22,60,738	...	6,402	...	...	1,00,390	23,97,000	21,68,623	48,58,012	11,71,901	37,11,708	16.31
Upper Chenab Canal	... 3,67,03,607	20,51,637	...	490	...	...	38,757	20,63,684	5,59,087	20,32,109	12,60,009	13,41,213	3.73
Lower Chenab Canal	... 3,74,86,316	69,11,619	7,281	29,457	18,098	317	61,690	80,20,377	74,61,600	1,07,78,337	23,74,070	1,49,03,371	43.03	
Upper Jhelum Canal	... 4,10,00,973	9,61,471	...	1,103	...	...	41,407	6,01,930	6,60,223	15,50,309	7,37,045	8,12,023	1.81
Lower Jhelum Canal	... 1,05,77,570	25,07,707	...	6,515	31,159	...	27,313	20,62,902	18,01,192	42,67,171	8,60,215	33,00,039	20.33	
Upper Sutlej Inundation Canals	... 18,18,200	4,33,274	...	2,223	...	...	8,707	4,31,383	2,85,160	7,22,413	3,76,507	8,46,018	10.03
Sindhu Inundation Canals	... 13,30,074	4,31,373	43	1,623	...	...	2,650	4,35,035	2,03,393	6,83,293	95,763	5,42,600	40.73
Indus Inundation Canals	... 23,61,743	1,71,277	...	3,020	...	...	87,033	2,63,330	2,20,816	4,92,045	2,70,650	2,21,769	7.54
Total	... 23,45,11,651	2,78,20,525	7,326	1,61,106	3,07,350	27,812	10,42,782	2,91,20,337	1,33,71,691	4,37,02,041	1,10,11,431	8,27,77,610	14.33	
CONTRIBUTION.														
Western Jumna Canal	... 11,00,478	3,61,631	...	634	530	...	6,750	2,69,640	...	3,69,910	1,02,091	3,00,550	14.38	
Rihand Canal	... 1,43,23,430	23,80,700	...	16,408	57,067	6,473	20,607	24,07,333	...	21,07,330	7,75,567	17,21,172	12.03	
Total	... 1,54,68,016	26,17,471	...	16,000	57,503	6,473	40,900	27,07,170	...	27,07,170	8,78,514	16,68,331	12.20	
WORKS FOR WHICH CAPITAL AND REVENUE ACCOUNTS ARE KEPT.														
Shahzad Canals	... 2,25,021	25,908	...	...	...	...	...	25,903	6,378	31,386	61,010	-32,021	14.50
Glagger Canals	Imperial ... 3,64,751	4,368	...	...	...	...	...	4,368	...	4,368	23,701	-10,423	4.20
Contribution	... 2,66,193	2,435	...	...	...	...	201	22,723	...	2,726	19,510	-5,703	2.03
Total	Imperial ... 6,00,775	80,170	...	...	...	...	...	30,170	6,373	35,761	61,601	-48,047	8.01
Contribution	... 2,98,188	2,435	...	...	...	...	201	2,723	...	2,726	8,519	-5,703	2.02
WORKS FOR WHICH ONLY REVENUE ACCOUNTS ARE KEPT.														
Lower Sutlej Inundation Canals	...	1,07,490	...	1,657	...	...	1,703	1,70,008	2,77,755	4,49,721	3,44,027	1,03,704	...
Chenab Inundation Canals	...	1,60,100	...	8,710	...	...	2,850	1,71,205	2,68,715	4,30,050	1,75,627	2,01,123	...
Matsangarh Inundation Canals	...	5,32,050	...	6,615	...	...	2,213	2,11,612	3,71,778	6,12,630	3,41,002	2,71,395	...
Total	...	5,60,072	...	16,010	...	...	6,925	5,63,013	8,16,278	16,01,271	8,01,616	6,39,745	...
PROVINCIAL WORKS FOR WHICH ONLY REVENUE ACCOUNTS ARE KEPT.														
Shahpur Canals	...	16,850	...	...	...	...	...	16,850	1,331	17,163	38,010	-21,830	...
Bari Canal	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	...	16,850	...	...	...	...	...	16,850	1,331	17,163	80,010	-21,830	...

* Figures reported by the Bikaner State.
† Includes Rs. 5,000 spent by the Bikaner State.

I.D.

STATEMENT OF TRAFFIC ON CANALS IN THE PUNJAB DURING THE YEAR 1918-19.

Particulars,		Western Jamna Canal.	Sirhind Canal.
Length of Channel open for navigation	... Miles	131	138
Receipts—			
Tollage on private boats	... Rs.	187	1,855
" " Government boats	... "	...	...
" " rafts	... "	65,980	16,037
Carrying operations or transport service—			
Hire of Government boats	... "	...	...
Refund of revenue	... "	...	...
Total receipts	... "	66,117	17,892
Maintenance charges, including special Navigation Establishment	... "	6,265	3,909
Net revenue of year	... "	59,852	13,983
Total number of boats plying cargo	... "	...	...
" " " passengers	... "	...	...
Total registered tonnage cargo	... "	...	...
" " " passengers	... "	...	...
Ton mileage, Up (a)	... "	...	...
Down	... "	...	...
Total	... "	...	...
Estimated value of cargoes, Up (a)	... Rs.	...	...
" " " Down	... "	...	...
Total	... "	...	...
Number of passengers	... "	...	30,198
Rafts, Up	... c. ft.	...	...
" Down	... "	2,067,710	1,870,302
Total	... "	2,067,719	1,870,302
Estimated value of rafts	... Rs.	2,903,700	13,45,981
Tollage on boats per ton per mile (a)	... "	...	...
" " rafts per 100 c. ft.	... "	3.19	0.86

(a) Details of boat traffic are not recorded (Government of India, Public Works Department, No. 78-I, dated 22nd April 1892).

II D.

DESCRIPTION AND QUANTITIES OF RAFT TRAFFIC ON CANALS IN THE PUNJAB DURING THE YEAR 1915-19.

Particulars.	WESTERN JUMNA CANAL.						SIRHIND CANAL.						TOTAL.						
	Total.			Particulars.			Total.			Particulars.			Total.			Particulars.			
	Quantity in tons.	Value.	Quantity.	Value.	Quantity in tons.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity in tons.	Value.	Quantity.	Value.	Quantity.	Value.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
RATES.	P.U.	Down.	Total.	Rs.	Tons.	Rs.	Up.	Down.	Total.	Rs.	Tons.	Rs.	Tons.	Rs.	Up.	Down.	Total.	Rs.	
Timber in logs, round and squared	1,761	1,761	1,23,270	913	63,840
Sleepers, broad gauge	25,633	25,633	9,57,445	22,054	6,95,291
" metre "	4,271	4,271	1,12,103	3,846	1,00,919
Scantlings	2,733	2,733	1,63,143	5,421	1,34,009
Bamboo and reeds	1	1	24	1	24
Firewood	
Total	...	38,716	38,716	29,03,700	38,716	29,03,700	...	34,269	34,269	13,45,984	31,137	11,97,053	...	73,015	42,49,681	69,453	41,01,955		

Note.—According to the new system details under the Western Jumna Canal cannot be filled in.

X E with Appendix A.

STATEMENT OF AREAS IRRIGATED BY IRRIGATION WORKS IN THE PUNJAB DURING THE YEAR 1918-19.

APPENDIX A TO STATEMENT I.E.
**STATEMENT SHOWING AREAS ON WHICH OCCUPIERS' RATES WERE REMITTED
 DURING THE YEAR 1918-19.**

CAUSE OF REMISSION.	KHARIF, 1918.				BARI, 1918-19.			
	Area assessed. 1	Area remitted. 2	Total area irrigated. 3	Percentage remitted. 4	Area assessed. 6	Area remitted. 7	Total area irrigated. 8	Percentage remitted. 9
WESTERN JUMNA CANAL.								
1. Wrong assessment	Acres. 185		Acres. 128			
2. Escape irrigation	60	
3. Under Tenancy Rules	3		...	...	8	
4. Short supply	92		...	...	178	
5. Hail	57	
6. Frost	
7. High wind	
8. Flooding { (a) by heavy rain	143		...	...	35	
{ (b) from canal	7	7	
9. Rats	
10. Locusts	
11. Other insects and blight	15,913		...	...	8,104	
12. Bad germination or cultivation	7,399		...	...	803	
13. Bad soil	
14. High land	
15. Miscellaneous	47		...	24	...	
Total	826,010	(a) 22,103	349,172	6.62	306,576	(a) 4,491	371,360	1.21
SIRhind CANAL (IMPERIAL).								
1. Wrong assessment	1	...	
2. Escape irrigation	
3. Under Tenancy Rules	60		...	...	1,346	
4. Short supply	1	
5. Hail	7		...	...	...
6. Frost	4	
7. High wind	8	
8. Flooding { (a) by heavy rain	393		...	...	8	
{ (b) from canal	
9. Rats	231		...	20	...	
10. Locusts	
11. Other insects and blight	1,143		...	...	608	
12. Bad germination or cultivation	154		...	...	897	
13. Bad soil	
14. High land	
15. Miscellaneous	656		...	407	...	
Total	303,800	2,644	366,510	0.80	678,576	2,790	691,365	0.49
UPPER BARI DOAB CANAL.								
1. Wrong assessment	10		...	18	...	
2. Escape irrigation	
3. Under Tenancy Rules	850		...	...	2,110	
4. Short supply	20		...	...	52	
5. Hail	
6. Frost	
7. High wind	152	
8. Flooding { (a) by heavy rain	17	
{ (b) from canal	34	
9. Rats	1	
10. Locusts	
11. Other insects and blight	16,242		...	...	214	
12. Bad germination or cultivation	18		...	...	...
13. Bad soil	2	
14. High land	
15. Miscellaneous	437		...	314	...	
Total	507,272	17,616	524,688	3.35	537,243	2,913	540,161	0.54
LOWER BARI DOAB CANAL.								
1. Wrong assessment	
2. Escape irrigation	
3. Under Tenancy Rules	19,814		...	...	86,435	
4. Short supply	4,959		...	...	700	
5. Hail	10		...	...	8	
6. Frost	
7. High wind	
8. Flooding { (a) by heavy rain	
{ (b) from canal	104	
9. Rats	107		...	...	2	
10. Locusts	3		...	...	...
11. Other insects and blight	6,610		...	...	270	
12. Bad germination or cultivation	6,784		...	...	6,973	
13. Bad soil	22,474		...	...	12,339	
14. High land	260		...	...	1,410	
15. Miscellaneous	10,058		...	...	7,438	...
Total	269,494	66,109	325,500	20.0	286,708	66,708	369,411	18.65
(a) Detail of area remitted—								
In the four Divisions	
In Patiala State	
In Jind State	
Total	
	Kharif.	Bari.						
	22,892	4,230						
	284	284						
	16	...						
	23,192	4,484						

**STATEMENT SHOWING AREAS ON WHICH OCCUPIERS' RATES WERE REMITTED
DURING THE YEAR 1918-19—CONTINUED.**

CAUSES OF REMISSION.	KURRAN, 1918.				RATE, 1918-19.			
	Area affected	Amount remitted	Total area affected	Percentage remitted	Area affected	Amount remitted	Total area affected	Percentage remitted
			Acres	%			Acres	%
1								
1. Wrong assessment
2. Escape irrigation
3. Under-Tenancy Rules
4. Short supply	104	...	...	...	...	...
5. Hall
6. Frost
7. High wind
8. Flooding { (a) by heavy rain
8. Flooding { (b) from canal
9. Rats
10. Locusts
11. Other insects and blight
12. Bad germination or cultivation
13. Bad soil
14. High land
15. Miscellaneous
16. Perpetual remission
17. Dog attack
Total	10,512	£1,760	104.72	100	10,512	£1,760	104.72	100
LOOWER JHELUM CANAL.								
1. Wrong assessment
2. Escape irrigation
3. Under-Tenancy Rules
4. Short supply
5. Hall
6. Frost
7. High wind
8. Flooding { (a) by heavy rain
8. Flooding { (b) from canal
9. Rats
10. Locusts
11. Other insects and blight
12. Bad germination or cultivation
13. Bad soil
14. High land
15. Miscellaneous
Total	78,102	£1,773	104.42	100	78,102	£1,773	104.42	100
UPPER CHENAB CANAL.								
1. Wrong assessment
2. Escape irrigation
3. Under-Tenancy Rules
4. Short supply
5. Hall
6. Frost
7. High wind
8. Flooding { (a) by heavy rain
8. Flooding { (b) from canal
9. Rats
10. Locusts
11. Other insects and blight
12. Bad germination or cultivation
13. Bad soil
14. High land
15. Miscellaneous
Total	107,107	£1,407	104.03	100	107,107	£1,407	104.03	100
LOWER JHELUM CANAL.								
1. Wrong assessment
2. Escape irrigation
3. Under-Tenancy Rules	104	...	...	...	...	...
4. Short supply	5	...	...	...	...	...
5. Hall	11	...	...	...	...	...
6. Frost	3	...	...	...	...	...
7. High wind	3	...	...	...	...	...
8. Flooding { (a) by heavy rain
8. Flooding { (b) from canal
9. Rats	290	...	...	...	...	...
10. Locusts	8,772	...	...	...	...	...
11. Other insects and blight	3,355	...	...	...	...	...
12. Bad germination or cultivation	255	...	...	...	...	...
13. Bad soil	185	...	...	...	...	...
14. High land
15. Miscellaneous
Total	243,573	£9,448	251,601	100	243,573	£9,448	251,601	100

STATEMENT SHOWING AREAS ON WHICH OCCUPIERS' RATES WERE REMITTED
DURING THE YEAR 1918-19—CONTINUED.

CAUSE OF REMISSION.	KHAZI, 1918.				Rabi, 1918-19.			
	Area assessed.	Area remitted.	Total area irrigated.	Percentage remitted.	Area assessed.	Area remitted.	Total area irrigated.	Percentage remitted.
1	2	3	4	5	6	7	8	9
UPPER SUTLEJ INUNDATION CANALS.								
1. Wrong assessment	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
2. Escape irrigation
3. Under Tenancy Rules		9,536				5
4. Short supply
5. Hail
6. Frost
7. High wind
8. Flooding { (a) by heavy rain { (b) from canal		895				...
9. Rats
10. Locusts
11. Other insects and blight		4,471				...
12. Bad germination or cultivation
13. Bad soil
14. High land
15. Miscellaneous
Total	186,258	14,902	161,155	9.88	107,844	...	107,844	—
SIDHNAI CANALS.								
1. Wrong assessment
2. Escape irrigation
3. Under Tenancy Rules	18,787	...	...			...
4. Short supply
5. Hail				3,559
6. Frost
7. High wind
8. Flooding { (1) by heavy rain { (2) from canal { (3) from river				4
9. Rats
10. Locusts
11. Other insects and blight	1,264	...	...			27
12. Bad germination or cultivation			10
13. Bad soil	5,426	...	...			5,698
14. High land
15. Miscellaneous	168	...	...			481
Total	95,572	26,640	121,212	21.15	98,231	9,954	108,185	9.21
INDUS INUNDATION CANALS.								
1. Wrong assessment
2. Escape irrigation
3. Under Tenancy Rules	42,281	...	...			...
4. Short supply
5. Hail
6. Frost
7. High wind
8. Flooding { (1) by rain { (2) from canal { (3) hill torrent { (4) from river
9. Rats
10. Locusts	203	...	...			...
11. Other insects and blight
12. Bad germination or cultivation	3,803	...	...			...
13. Bad soil			9,949
14. High land
15. Salty water
16. Scanty rain
17. Miscellaneous
Total	74,792	16,352	121,144	28.26	50,004	8,019	59,953	26.60

**STATEMENT SHOWING AREAS ON WHICH OCCUPIERS' RATES WERE REMITTED
DURING THE YEAR 1918-19—CONTINUED.**

CAUSE OF REMISSION.	KHARIF, 1918.				RABI, 1918-19.			
	Area affected.	Area remitted.	Total area irrigated.	Percentage remitted.	Area affected.	Area remitted.	Total area irrigated.	Percentage remitted.
1	2	3	4	5	6	7	8	9
CHENAB INUNDATION CANALS.								
1. Wrong assessment
2. Excessive Irrigation
3. Under Tenancy Rules
4. Short supply
5. Hall
6. Frost
7. High wind
8. Flooding	{ (1) by rain (2) from canal (3) from river	...	...	...	...	...	...	...
9. Rate
10. Leetants
11. Other insects and blight
12. Red soil
13. High land
14. Miscellaneous
Total	62,270	22,904	76,497	31.2%	45,748	4,720	50,142	5.7%
LOWER SUTLEJ INUNDATION CANALS.								
1. Wrong assessment
2. Excessive irrigation
3. Under Tenancy Rules
4. Short supply
5. Hall
6. Frost
7. High wind
8. Flooding	{ (1) by heavy rain (2) from canal	...	...	...	...	...	...	...
9. Rate
10. Leetants
11. Other insects and blight
12. Red soil
13. High land
14. Miscellaneous
Total	59,448	37,576	97,048	38.6%	47,973	5,210	92,002	5.5%
MUZAFFARGHAN INUNDATION CANALS.								
1. Wrong assessment
2. Excessive irrigation
3. Under Tenancy Rules
4. Short supply
5. Hall
6. Frost
7. High wind
8. Flooding	{ (1) by heavy rain (2) from canal	...	...	...	...	...	...	...
9. Rate
10. Leetants
11. Other insects and blight
12. Red soil
13. High land
14. Miscellaneous
Total	100,610	21,160	121,760	17.4%	173,600	18,821	186,528	10.2%

STATEMENT SHOWING AREAS ON WHICH OCCUPIERS' RATES WERE REMITTED
DURING THE YEAR 1918-19—CONCLUDED.

		KHARIF, 1918.			RABI, 1918-19.				
CAUSE OF REMISSION.		Area assessed.	Area remitted.	Total area irrigated.	Percentage remitted.	Area assessed.	Area remitted.	Total area irrigated.	Percentage remitted.
1	2	3	4	5	6	7	8	9	
SHAHPUR IMPERIAL CANALS.		Acres.	Acres.	Acres.		Acres	Acres.	Acres.	
1. Wrong assessment	
2. Escape Irrigation	
3. Under Tenancy Rules	
4. Short supply	
5. Hail	
6. Frost	
7. High wind	
8. Flooding { (a) by heavy rain	
8. Flooding { (b) from canal	
9. Rats	
10. Locusts	
11. Other insects and blight	
12. Bad germination or cultivation	1,810		...	...	1,000	
13. Bad soil	
14. High land	
15. Miscellaneous	805	
Total	...	4,015	1,810	5,825	31.07	7,957	2,945	10,802	27.01
GHAGGAR CANALS.									
1. Wrong assessment	8	...		...	...	...
2. Escape irrigation	
3. Under Tenancy Rules	515	
4. Short supply	70	...		...	...	380	
5. Hail	
6. Frost	
7. High wind	
8. Flooding { (a) by heavy rain	
8. Flooding { (b) from canal	5	...		...	...	...
9. Rats	
10. Locusts	
11. Other insects and blight	
12. Bad germination or cultivation	
13. Bad soil	
14. High land	
15. Miscellaneous	
Total	...	1,992	(A) 78	2,070	9.77	9,905	(B) 845	10,750	7.86
SHAHPUR PROVINCIAL CANALS.									
1. Wrong assessment	
2. Escape irrigation	
3. Under Tenancy Rules	484	...		...	...	180	
4. Short supply	119	
5. Hail	
6. Frost	
7. High wind	
8. Flooding { (a) by heavy rain	
8. Flooding { (b) from canal	
9. Rats	
10. Locusts	
11. Other insects and blight	
12. Bad germination or cultivation	869	...		...	...	...
13. Bad soil	
14. High land	
15. Miscellaneous	
Total	...	9,870	653	10,220	8.34	2,045	809	2,054	10.5
								(A)	(B)
British	28	830
Bikaner	50	515
						Total	...	78	845

H.E.

STATEMENT SHOWING INCIDENCE OF WORKING EXPENSES AND ASSESSED WATER REVENUE ON THE CANALS IN THE PUNJAB DURING 1918-19.

NAME OF CANAL.	WATER RATE ASSESSED IN 1918-19.										Occurring's Water Rate per acre of land. Rs.	Per acre required to irrigate by water of the canal. Rs.	Per acre irrigated by water of the canal. Rs.	Per acre irrigated by water of the canal. Rs.	Total Water Rate object and interest. Rs.	
	1	2	3	4	5	6	7	8	9	10						
Major Irrigation Works.																
Western Jhelum Canal (excluding its branch)	2,621	2,62,273	12,62,733	2,62,733	2,62,733	2,62,733	2,62,733	2,62,733	2,62,733	2,62,733	2,62,733	2,62,733	2,62,733	2,62,733	2,62,733	2,62,733
British and Foreign Sethi Canal (Patiala)	2,621	2,62,273	12,62,733	2,62,733	2,62,733	2,62,733	2,62,733	2,62,733	2,62,733	2,62,733	2,62,733	2,62,733	2,62,733	2,62,733	2,62,733	2,62,733
" (Patiala, Nahan) " " " " "	2,621	2,62,273	12,62,733	2,62,733	2,62,733	2,62,733	2,62,733	2,62,733	2,62,733	2,62,733	2,62,733	2,62,733	2,62,733	2,62,733	2,62,733	2,62,733
Upper Sutlej Canal	1,621	1,62,063	8,10,312	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063
Lower Ravi River Canal	1,621	1,62,063	8,10,312	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063
Upper Chena Canal	1,621	1,62,063	8,10,312	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063
Lower Chena Canal	1,621	1,62,063	8,10,312	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063
Upper Jhelum Canal	1,621	1,62,063	8,10,312	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063
Lower Jhelum Canal	1,621	1,62,063	8,10,312	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063
Upper Sutlej Canal	1,621	1,62,063	8,10,312	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063
Lower Sutlej Canal	1,621	1,62,063	8,10,312	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063
Indus Irrigation Canal	1,621	1,62,063	8,10,312	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063
T-TAB																
Minor Irrigation Works.																
Rubber (Injhal) Jhelum River Canal	1,621	1,62,063	8,10,312	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063
Gidgor Irrigation Canal (Bathinda)	1,621	1,62,063	8,10,312	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063
Lower Ravi Irrigation Canal	1,621	1,62,063	8,10,312	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063
Chaubhatti Canal	1,621	1,62,063	8,10,312	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063
Muktsar Branch Canal	1,621	1,62,063	8,10,312	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063
Sukkur (Upper) Irrigation Canal	1,621	1,62,063	8,10,312	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063	1,62,063
Total			8,51,949		8,51,949	8,51,949	8,51,949	8,51,949	8,51,949	8,51,949	8,51,949	8,51,949	8,51,949	8,51,949	8,51,949	8,51,949

* Includes Rs. 1,62,063/- levied by the Jhelum State,
** Levy on water supplied by the Ravi River,
† Exempted by the Jhelum State.

III E.

**STATEMENT OF QUANTITY AND VALUE OF CROPS IRRIGATED IN THE
PUNJAB DURING THE YEAR 1918-19.**

三

STATEMENT OF QUANTITY AND VALUE OF CROPS

IRRIGATED IN THE PUNJAB DURING THE YEAR 1918-19.

III E--

STATEMENT OF QUANTITY AND VALUE OF CROPS IRRIGATED

NAME OF CROP.			SINGAPORE CAPITAL		INTER-IMPORATION CAXAS.		SINGAPORE (INTERSTATE) EXPORTATION CAPITAL		SINGAPORE (INTERSTATE) IMPORTATION CAPITAL	
English.	Vernacular.	Sericulture	Area, acre.	Area, acre.	Area, acre.	Estimated value.	Area, acre.	Area, acre.	Area, acre.	Area, acre.
1	2	3	4	5	6	7	8	9	10	11
Cereals—										
Wheat	Gandum	Telurung selera	Acre.	Per cent.	Acre.	Rupees	Rupees	Rupees	Rupees	Rupees
Pooley	Jowar	Hukum selera	49,52,442	49,52,442	49,52,442	4,248	4,248	4,248	4,248	4,248
Rice	Beras	Parasit selera	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Maize	Mai	Maia selera	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Oats	Ubi	Aswad selera	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Millet	Millets, etc.	"	214	4,061	"	"	"	"	"	"
Others at I.P. 10%										
Great Millet	Jawar	Aswad selera	2,000	2,000	2,000	1,000	1,000	1,000	1,000	1,000
Small Millet	Jowar	Hukum selera	2,000	2,000	2,000	1,000	1,000	1,000	1,000	1,000
Millets, etc.	Jowar	Parasit selera	2,000	2,000	2,000	1,000	1,000	1,000	1,000	1,000
Gram	Kentli	Parasit selera	2,000	2,000	2,000	1,000	1,000	1,000	1,000	1,000
Lentil	Ubi	Ubi selera	2,000	2,000	2,000	1,000	1,000	1,000	1,000	1,000
Pest	Ubi	Pest selera	2,000	2,000	2,000	1,000	1,000	1,000	1,000	1,000
Others	Ubi	Ubi selera	2,000	2,000	2,000	1,000	1,000	1,000	1,000	1,000
Millet	Ubi	Ubi selera	2,000	2,000	2,000	1,000	1,000	1,000	1,000	1,000
Others	Ubi	Ubi selera	2,000	2,000	2,000	1,000	1,000	1,000	1,000	1,000
Legumes, etc.										
Tobacco	Tobacco	Parasit selera	300	300	300	1,000	1,000	1,000	1,000	1,000
Pepper	Pepper	Parasit selera	100	100	100	1,000	1,000	1,000	1,000	1,000
Arice, 1st & 2nd	Arice	Parasit selera	100	100	100	1,000	1,000	1,000	1,000	1,000
Intercrop	Intercrop	Parasit selera	100	100	100	1,000	1,000	1,000	1,000	1,000
Century	Century	Parasit selera	100	100	100	1,000	1,000	1,000	1,000	1,000
Cotton	Cotton	Parasit selera	100	100	100	1,000	1,000	1,000	1,000	1,000
Turmeric	Turmeric	Parasit selera	100	100	100	1,000	1,000	1,000	1,000	1,000
Amaranth	Amaranth	Parasit selera	100	100	100	1,000	1,000	1,000	1,000	1,000
Others	Others	Parasit selera	100	100	100	1,000	1,000	1,000	1,000	1,000
Fibre										
Cotton	Cotton	Parasit selera	10,000	10,000	10,000	1,000	1,000	1,000	1,000	1,000
Wood Fibre	Wood Fibre	Parasit selera	100	100	100	1,000	1,000	1,000	1,000	1,000
Miscellany.	Miscellany.	Parasit selera	100	100	100	1,000	1,000	1,000	1,000	1,000
Flax										
Linens	Linens	Parasit selera	100	100	100	1,000	1,000	1,000	1,000	1,000
Flax Linens	Flax Linens	Parasit selera	100	100	100	1,000	1,000	1,000	1,000	1,000
Miscellany.	Miscellany.	Parasit selera	100	100	100	1,000	1,000	1,000	1,000	1,000
Others										
Ginger, Calabash	Ginger	Aswad selera	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Onion	Onion	Parasit selera	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Turnip	Turnip	Parasit selera	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Mustard	Mustard	Parasit selera	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Others	Others	Parasit selera	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Fruit and Vegetables										
Orchids	Orchids	Parasit selera	100	100	100	1,000	1,000	1,000	1,000	1,000
Chillies	Chillies	Parasit selera	100	100	100	1,000	1,000	1,000	1,000	1,000
Melons	Melons	Parasit selera	100	100	100	1,000	1,000	1,000	1,000	1,000
Cucumbers	Cucumbers	Parasit selera	100	100	100	1,000	1,000	1,000	1,000	1,000
Carrots	Carrots	Parasit selera	100	100	100	1,000	1,000	1,000	1,000	1,000
Onions	Onions	Parasit selera	100	100	100	1,000	1,000	1,000	1,000	1,000
Onions	Onions	Parasit selera	100	100	100	1,000	1,000	1,000	1,000	1,000
Tomato	Tomato	Parasit selera	100	100	100	1,000	1,000	1,000	1,000	1,000
Watercress	Watercress	Parasit selera	100	100	100	1,000	1,000	1,000	1,000	1,000
Garlic	Garlic	Parasit selera	100	100	100	1,000	1,000	1,000	1,000	1,000
Broccoli	Broccoli	Parasit selera	100	100	100	1,000	1,000	1,000	1,000	1,000
Vegetables	Vegetables	Parasit selera	100	100	100	1,000	1,000	1,000	1,000	1,000
Miscellaneous	Miscellaneous	Parasit selera	100	100	100	1,000	1,000	1,000	1,000	1,000
Foliers										
Leaves Grav.	Leaves Grav.	Parasit selera	100	100	100	1,000	1,000	1,000	1,000	1,000
Grass	Grass	Parasit selera	100	100	100	1,000	1,000	1,000	1,000	1,000
Millets, etc.	Millets, etc.	Parasit selera	100	100	100	1,000	1,000	1,000	1,000	1,000
Papaya	Papaya	Parasit selera	100	100	100	1,000	1,000	1,000	1,000	1,000
Miscellaneous	Miscellaneous	Parasit selera	100	100	100	1,000	1,000	1,000	1,000	1,000
Fallows	Fallows	Parasit selera	100	100	100	1,000	1,000	1,000	1,000	1,000
Single watering	Single watering	Parasit selera	100	100	100	1,000	1,000	1,000	1,000	1,000
Plantations	Plantations	Parasit selera	100	100	100	1,000	1,000	1,000	1,000	1,000
Miscellaneous	Miscellaneous	Parasit selera	100	100	100	1,000	1,000	1,000	1,000	1,000
Waterfalls	Waterfalls	Parasit selera	100	100	100	1,000	1,000	1,000	1,000	1,000
Total			100,000	1,00,00,000	100,000	47,00,000	12,00,000	12,00,000	8,48,400	11,114
Grand Total			100,000	1,00,00,000	100,000	67,50,000	11,073	6,64,400	11,114	3,22,300

CONCLUDED.

IN THE PUNJAB DURING THE YEAR 1918-19—CONCLUDED.

IV E.

COMPARATIVE STATEMENT OF IRRIGATION AND RAINFALL FOR THE YEARS 1918-19 AND 1917-18 IN THE PUNJAB.

CIVIL DISTRICT.	Or the Civil Survey.	Total area, in acres, in hect.	Cultivable area, in acres,	Name.	Area Irrigated, in acres.				Rainfall, inches.			
					1917-18.		1918-19.		1917-18.		1918-19.	
					Central part of the valley irrigated with water from the Sutlej River.	Remaining part of the valley irrigated with water from the Sutlej River.	Total.	Rainfall.	Total.	Rainfall.	Total.	Rainfall.
1	2	3	4	5	(6) ^a	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Delhi	..	356,103	229,613	..	1,000	1,000	2,000	10,500	10,500	10,500	2735	2735
Bankei	..	1,437,016	1,374,132	Western Jumna Canal	1,117,130	1,117,130	1,117,130	10,500	10,500	10,500	3569	3569
Karnal	..	1,293,415	1,253,107	..	1,157,513	1,157,513	1,157,513	10,500	10,500	10,500	1115	1115
Ambala	..	1,18,103	674,513	..	613	613	613	10,500	10,500	10,500	6590	6590
Hissar	..	3,519,321	3,164,020	Western Jumna Canal Shabat Canal Ghaggar Canal Total	2,731,624	2,731,624	2,731,624	10,500	10,500	10,500	3502	3502
Jind State	..	552,013	497,290	Western Jumna Canal Sialian Canal Total	497,290	497,290	497,290	10,500	10,500	10,500	..	..
Mohali State	..	4,632,341	3,591,534	Western Jumna Canal Ghaggar Canal Total	3,174,523	3,174,523	3,174,523	10,500	10,500	10,500	2905	2905
Patiala State	..	3,703,714	3,453,210	Western Jumna Canal Sialian Canal Total	2,921,703	2,921,703	2,921,703	10,500	10,500	10,500	..	..
Hoshiarpur	..	1,021,733	87,573	Western Jumna Canal Sialian Canal Total	1,021,733	1,021,733	1,021,733	10,500	10,500	10,500	3961	3961
Ludhiana	..	531,633	816,816	Western Jumna Canal Sialian Canal Total	2,341,231	2,341,231	2,341,231	10,500	10,500	10,500	4126	4126
Firozpur	..	2,135,263	1,769,618	..	1,501,343	1,501,343	1,501,343	10,500	10,500	10,500	3331	3331
Nabha State	..	650,437	545,210	..	511,153	511,153	511,153	10,500	10,500	10,500	..	..
Faridkot State
Amritsar	..	1,024,437	653,539	Upper Ravi Ditch Canal Talana	1,024,437	1,024,437	1,024,437	10,500	10,500	10,500	3961	3961

Laborer	1,761,900	1,515,256	1,241,322	Upper Baris Deob Canal	565,215	497,650	295,001	307,750	605,857	334,829	290,973	10,92	3655		
				Upper Sutlej Irrigation Canals	251,895	93,930	20,818	16,911	36,779	31,059	73,916	8,77	3001		
				Upper Chenab Canal	17,382	4,122	1,283	885	5,138	2,045	710	8,96	8888		
				Lower Baris Deob Canal	6,956	4,637	2,063	1,703	2,426	1,410	3,660	4,40	...		
				Total	1,172,470	630,235	322,245	309,235	619,800	370,595	439,516	809,817	...		
Montgomery	...	2,519,530	1,032,473	Upper Sutlej Irrigation Canals	17,911	205,228	130,317	91,403	221,720	168,701	205,241	303,943	4,80		
				Himayat Canal	...	...	...	...	160	150	1,375	...	23,07	
				Lower Baris Deob Canal	616,160	234,367	252,013	180	217,668	238,388	460,056	4,40	30,96		
				Upper Baris Deob Canal	...	...	...	...	1,233	1,233	1,233	...	...
				Total	1,640,591	810,317	364,634	843,635	708,279	376,510	440,085	829,604	...		
Multan	...	3,703,008	1,294,682	Sillumai Canal	841,150	150,000	121,212	109,185	220,397	191,507	187,235	318,443	6,81		
				Chenab Irrigation Canals	360,313	200,000	100,000	60,143	120,039	131,598	229,043	376	17,64		
				Lower Sutlej Irrigation Canals	805,163	250,000	82,339	81,053	173,882	144,839	173,735	310,918	4,63	18,85	
				Himayat Canal	...	...	...	...	11,609	11,651	14,593	21,403	...	19,35
				Lower Baris Deob Canal	450,312	300,205	89,163	98,836	187,799	76,332	80,210	161,678	4,84	18,76	
				Total	...	2,059,930	900,205	383,810	343,716	733,501	460,764	606,219	1,072,973	...	
Aquadgarh	...	3,566,914	743,234	Muzaffargarh Irrigation Canals	674,932	350,000	121,738	186,773	308,502	100,928	224,379	334,807	4,75	19,54	
Dera Ghazi Khan	...	3,481,025	1,215,929	Indus Irrigation Canals	422,923	305,780	121,144	69,953	161,097	64,171	204,213	2,35	11,86		
Gujranwala	...	2,417,965	1,543,801	Lower Chenab Canal	713,703	403,757	162,198	310,501	622,039	105,303	258,459	464,803	11,15	32,09	
				Upper Chenab Canal	...	1,228,110	153,543	1,28,830	185,373	733,322	171,900	231,736	12,75	32,16	
				Total	...	1,911,953	918,300	331,057	526,174	867,241	313,103	405,804	749,607	...	
Lahore	...	2,221,622	1,913,446	Lower Chenab Canal	1,408,724	1,059,272	609,341	1,010,653	1,619,693	461,336	1,055,158	1,610,394	6,27	25,08	
				Upper Chenab Canal	...	92,293	61,441	17,371	20,134	37,505	21,782	14,309	35,180	9,80	33,92
				Total	...	1,668,417	1,160,713	659,712	1,030,786	1,667,498	483,018	1,069,656	1,532,674
Jhang	...	2,171,725	1,963,078	Lower Chenab Canal	398,690	233,163	104,006	193,200	205,206	99,062	206,227	*305,869	7,99	26,44	
				Muzaffargarh Irrigation Canals	323,638	184,876	40,199	57,653	118,034	38,003	83,887	121,849	7,93	19,99	
				Lower Jhelum Canal	...	...	...	...	...	...	...	...	...	...
				Total	...	722,523	588,039	144,215	270,086	414,301	137,734	259,903	427,886
Shahpur	...	3,072,365	2,315,372	Lower Jhelum Canal	850,180	601,512	206,882	440,253	647,135	180,883	443,007	692,635	7,68	25,68	
				Shahpur (Imperial) Canals	62,954	42,000	10,304	10,304	16,638	12,985	42,833	803	26,48		
				Shahpur (Provincial) Canals	63,255	24,170	10,229	10,229	18,183	14,988	25,085	9,09	26,48		
				Upper Jhelum Canal	1,886	833	737	683	1,680	1,330	778	917	...	...
				Total	...	858,239	568,550	223,073	455,082	678,705	222,663	478,387	701,470
Gujrat	...	1,457,410	1,199,666	Lower Jhelum Canal	18,647	12,503	4,620	7,807	12,327	3,952	7,004	10,980	16,07	37,86	
				Upper Jhelum Canal	...	562,146	315,333	94,125	150,784	214,919	67,089	169,020	170,089
				Total	...	660,793	328,405	96,045	168,601	257,246	71,051	110,926	187,075
Sialkot	...	1,260,906	948,184	Upper Chenab Canal	191,276	63,183	87,171	13,608	52,979	44,583	49,248	169,	5034	...	
				Grand Total	...	17,239,540	8,465,055	3,778,020	5,297,364	9,015,884	3,797,551	5,268,350	9,035,801

(b) Columns 6 and 7 exclude the "culturable area commanded" and "area at present proposed to be naturally irrigated" by the Native States Branches of the Eighth Canal.

b) Includes 47,314 acres irrigated on the Native States Branches of the Sirhind Canal

and 01,637 acres by the Sirsa Branch, Western Jumna Canal, in the Patala State.

Ditto 01451 ditto
Ditto 48742 ditto

I F.

STATEMENT SHOWING OCCUPIER'S RATE IN FORCE ON THE CANALS IN THE PUNJAB DURING THE YEAR 1918-19.

Authority.	Class.	Nature of crop. ¹	RATE PER ACRE.		Per.			
			V.W.	S.M.				
WESTERN JUMNA CANAL INCLUDING SIRSA BRANCH.								
Decreasing Rate.								
Irrigation Branch Notification No. 697-R. L., dated 30th June 1916.	I	Sugarcane	10 0 0	6 0 0	Crop.			
	II	Rice and watercress	6 8 0	4 0 0	Do.			
	III	Brahari, jowar, jute, poppy, beans, vegetables, spices and melons.	5 5 0	3 8 0	Gardens and orchards per half-year; the rest per crop.			
	III-A	Wheat	5 0 0	3 4 0	Crop.			
	IV	Cotton, chaff, dyer's flowers, etc. all oil crops except wheat, gram, jowar, beans, vegetables and turpits.	4 0 0	2 8 0	Do.			
	V	All other crops not otherwise specified ...	3 0 0	1 22 0	Do.			
	VI	Gram, beans, chaff, turpits, vegetables, etc. ...	2 5 0	1 8 0	Do.			
	VII	Crops grown on the "or J" of a previous crop, not decreasing below the rate of the last crop by a non-irrigating crop in the same or next District.	2 4 0	0 12 0	Crop Watering.			
	VIII	Gram, beans and watercress in winter season ... For any number of extra crops in winter season ... For one wet season in winter ... For two crops in winter in rabi season ...	1 4 0	0 12 0	Half-year.			
LOWER CHAUTANG NALA CANAL.								
Decreasing Rate.								
Irrigation Branch Notification No. 1601-R. L., dated 27th April 1920.	I	Sugarcane, rice and watercress	4 2 0	2 12 0	Do.			
	IV	Cotton, chaff and maize	2 8 0	1 14 0	Do.			
	V	Other than crops	1 12 0	1 2 0	Do.			
	VII	Special rates for watering before ploughing in rabi and chaff districts.	1 2 0	0 12 0	Do.			
SIRHIND CANAL.								
Zone I.								
All lands irrigated by the British Possessions of the Khalsa Chieftain except those situated in the Patti or Taluk of the Lahore District.								
Irrigation Branch Notification No. 273-R. L., dated 21st Decemr 1903.	I	Sugarcane	12 0 0	6 0 0	Crop.			
	II	Rice, jowar, jute, poppy, jute, dyer's flowers and beans, watercress, maize, wheat, vegetables, except turpits.	5 4 0	2 10 0	Gardens and orchards per half-year; the rest per crop.			
	III	Cotton, chaff, jowar, jute, chaff, barley, chaff, beans, maize, vegetables, poppy, beans, maize, chaff and other crops not otherwise specified.	4 0 0	2 0 0	Crop.			
	IV	Pista, jowar, chaff, maize, beans, guava, chaff, jute, gram, beans, vegetables, poppy, beans, maize and other crops not otherwise specified.	3 4 0	1 10 0	Do.			
	V	Single watering before ploughing not followed by a non-irrigating crop in the same or next District. Also crops grown on the "or J" of a previous crop.	1 8 0	0 12 0	Do.			
Irrigation Branch Notification No. 624-R. L., dated 12th May 1918.	VI	Special rates which may be made applicable to channels selected by the Local Government— A single watering before ploughing followed by a rabi crop.	2 4 0	1 2 0	Crop.			

STATEMENT SHOWING OCCUPIER'S RATE IN FORCE ON THE CANALS IN THE
PUNJAB DURING THE YEAR 1918-19—CONTINUED.

Authority.	Class.	Nature of crops.	RATE PER ACRE.		Per			
			Flow.	Laf.				
SIRHIND CANAL—CONCLUDED.								
ZONE II.								
<i>All lands irrigated by the British Branches of the Sirhind Canal in the Fazilka Talsil of the Ferozepore District.</i>								
Irrigation Branch Notification No. 273-R. I., dated 21st December 1904.	I	Sugarcane	10 0 0	5 0 0	Crop.			
Irrigation Branch Notification No. 273-R. I., dated 21st December 1904.	II	Rice, orchards, gardens, poppy, indigo, dyes, drugs and spices, water-nuts, maize, wheat, vegetables (except turnips).	5 0 0	2 8 0	Orchards and gardens per half-year; the rest per crop.			
Irrigation Branch Notification No. 273-R. I., dated 21st December 1904.	III	Cotton, chilis, melons, tobacco, fibres, barley, oil-seeds, beria, senji, all non-fodder crops in kharif and rabi not specified.	3 12 0	1 14 0	Crop.			
Irrigation Branch Notification No. 273-R. I., dated 21st December 1904.	IV	Bajra, jowar, chari, moth, mung, masli, guar, chana, masur, gram, turnips, peas, and all kharif and rabi fodder crops not specified.	3 0 0	1 8 0	Do.			
Irrigation Branch Notification No. 624-R. I., dated 12th May 1913.	V	Single watering before ploughing not followed by a canal-irrigated crop in the same or next harvest.	1 8 0	0 12 0	Each watering.			
Irrigation Branch Notification No. 624-R. I., dated 12th May 1913.		Also crops grown on the "wadis" of a previous crop.			Crop.			
<i>All lands irrigated by other than the British Branches of the Sirhind Canal.</i>								
Irrigation Branch Notification No. 6816-I., dated 27th November 1889.	I	Sugarcane, rice, water-nuts	7 8 0	5 0 0	Crop.			
Irrigation Branch Notification No. 6816-I., dated 27th November 1889.	II	Gardens, orchards, tobacco, poppy, vegetables, indigo, maize.	4 8 0	3 0 0	Do.			
Irrigation Branch Notification No. 6816-I., dated 27th November 1889.	III	Cotton, fibres, all dyes (except indigo), all rabi crops (except gram and masur).	3 12 0	2 8 0	Do.			
Irrigation Branch Notification No. 6816-I., dated 27th November 1889.	IV	All kharif crops not specified above and rabi crops of gram and masur.	2 10 0	1 12 0	Do.			
Irrigation Branch Notification No. 624-R. I., dated 12th May 1913.	V	Single watering before ploughing not followed by a canal-irrigated crop in the same or next harvest.	0 12 0	0 8 0	Each watering.			
Irrigation Branch Notification No. 624-R. I., dated 12th May 1913.	VI	Special rate which may be made applicable to channels selected by the Local Government— A single watering before ploughing for rabi followed by a rabi crop.	1 8 0	1 0 0	Crop.			
UPPER BARI DOAB CANAL.								
OCCUPIER'S RATE.								
Irrigation Branch Notification No. 2821-I., dated 10th June 1891.	I	Sugarcane and water-nuts	7 1 0	3 8 6	Crop.			
Irrigation Branch Notification No. 2821-I., dated 10th June 1891.	II	Rice	6 0 10	3 0 5	Do.			
Irrigation Branch Notification No. 2821-I., dated 10th June 1891.	III	Orchards and gardens, tobacco, poppy and other drugs, vegetables, melons.	4 8 8	2 4 4	Orchards and gardens per half-year; the rest per crop.			
Irrigation Branch Notification No. 2821-I., dated 10th June 1891.	IV	All dyes, fibres, and oilseeds, all rabi crops except gram and masur.	3 12 0	1 14 8	Crop.			
Irrigation Branch Notification No. 2821-I., dated 10th June 1891.	V	All kharif crops not specified above, rabi crops of gram and masur, all fodder crops.	2 12 5	1 6 23	Do.			

STATEMENT SHOWING OCCUPIER'S RATE IN FORCE ON THE CANALS IN THE PUNJAB DURING THE YEAR 1918-19—CONTINUED.

Authority.	Class.	Nature of crop.	RATES PER ACRE.		Per
			Flow.	Lift.	
			Rs. A. R.	Rs. A. R.	
UPPER BARI DOAB CANAL—continued.					
Occupier's Rate—continued.					
Irrigation Branch Notification No. 02-R. L., dated 21st May 1918.	VI	Special rates which may be made applicable to following command selected by the Local Government—	2 0 4	1 0 2	Crop.
Division.		Name of channel			
First.		<i>Main Line,</i>			
		Balampur Feeder,			
		Faridkotwar Feeder,			
		Sohjanpur Mill Channel,			
		Sarki Distillery,			
		Gulper Distillery,			
		Dhannaugh Navigation Channel, including Arsan Distillery,			
		Patiala Distillery,			
		Nawanshah Distillery,			
		Nawanshah Mill Channel			
		Ghazal & Distillery,			
		<i>Main Line, Upper,</i>			
		Patiala Distillery,			
		Patialnagar Distillery,			
Second.		Ranis Distillery,			
		Kot Karam Chan Distillery,			
		Kurja Distillery,			
		Patalnagh Distillery,			
		Kotla Distillery,			
		Tharlewal Distillery,			
		<i>Khur Branch,</i>			
		Jandiala Distillery,			
		Talawan Distillery,			
		Nawach Distillery,			
Fourth.		<i>Sibron Branch,</i>			
		Bearli Distillery,			
		Aitwal Distillery,			
		Vadala Distillery,			
		Diardin Distillery,			
		Gaggarbhiana Distillery,			
		Blindar Distillery,			

STATEMENT SHOWING OCCUPIER'S RATE IN FORCE ON THE CANALS IN THE PUNJAB DURING THE YEAR 1916-19—CONTINUED.

Authority.	Class.	Nature of crop.	RATE PER ACRE.		Per			
			Flow.	Lift.				
			Rs. A. P.	Rs. A. P.				
UPPER BARI DOAB CANAL—CONCLUDED.								
Occuper's RATE—concluded.								
Irrigation Branch Notification No. 628-R. I., dated 12th May 1913.	VII	A single watering before ploughing not followed by a canal-irrigated crop in the same or next harvest.	1 0 2	0 8 1	Each watering.			
		Crops grown on the "wadā" of a previous crop			Crop.			
Irrigation Branch Notifications No. 649-R. I., dated 28th March 1907, No. 698-R. I., dated 11th December 1907, and No. 680-R. I., dated 2nd July 1908.	VIII	Village plantations on areas to which the provisions of Act III of 1893 have been extended and District Board plantations within the Chunnian Colony—						
		For any number of waterings in the kharif season.	1 3 4	0 9 8	Half-year.			
		For one watering in rabi season ...	1 3 4	0 9 8	Do.			
		For two or more waterings in rabi season ...	2 11 7	1 6 0	Do.			
LOWER BARI DOAB CANAL.								
Occuper's RATE.								
Irrigation Branch Notification No. 517-R. I., dated 23rd April 1913.	I	Cane and water-nuts	9 0 0	4 8 0	Crop.			
	II	Rice	7 8 0	8 12 0	Do.			
	III	Orchards, gardens, tobacco, poppy, indigo, drugs, vegetables, melons and wheat.	6 0 0	2 8 0	Orchards and gardens per half-year; rest per crop.			
	IV	Cotton, chhā, dyes (other than indigo), oilseeds and all rabi crops, except wheat, gram, māṣur, senji, malna and turnip.	4 0 0	2 0 0	Crop.			
	V	All kharif crops not otherwise specified ...	3 0 0	1 8 0	Do.			
	VI	(a) Gram, māṣur, senji, turnips and malna ... (b) Crops grown on the "wadā" of a previous crop. (c) Single watering before ploughing for rabi followed by a rabi crop to be applicable only to channels selected by the Local Government.	2 4 0	1 2 0	(a) Crop, (b) and (c) acre			
	VII	Grass, village and District Board plantations— For any number of waterings in kharif season.	1 4 0	0 10 0	Half-year.			
		For one watering in rabi season ...	1 4 0	0 10 0	Do.			
		For two or more waterings in rabi season ...	2 8 0	1 4 0	Do.			
	VIII	(a) Single watering before ploughing not followed by a canal-irrigated crop in the same or next harvest. (b) Hemp (sun) and indigo which has been ploughed in as green manure before the 15th September.	0 8 0	0 4 0	Acre.			

STATEMENT SHOWING OCCUPIER'S RATE IN FORCE ON THE CANALS IN THE PUNJAB DURING THE YEAR 1918-19—CONTINUED.

Authority.	Class.	Nature of crop.	RATE PER ACRE.		Per			
			Flow.	Lift.				
UPPER CHENAB CANAL								
Occupier's Rate								
Irrigation Branch Notification No. 0223-I.L., dated 8th August 1912.	I	Care and water-melon	0 0 0	4 8 0	Crop.			
	II	Rice	2 8 0	3 12 0	Do.			
	III	Orchards, gardens, tobacco, poppy, indigo, drugs, vegetables, mustard and wheat.	6 0 0	2 8 0	Orchard or garden per 1-half acre) rent per acre.			
	IV	Cotton, flax, dye (other than Indigo), cotton and all other crops except wheat, grass, mustard, oil, onion and turnip.	3 0 0	2 0 0	(Crop)			
	V	All Kharif crops except those specified	3 0 0	1 8 0	Do.			
	VI	(a) Gram, maize, sorghum and millet						
		(b) Coorg, maize, cotton, maize, groundnut, etc.	2 4 0	1 2 0	(a) Crop, (b) soil (c) acre.			
		(c) Whole watershed before ploughing for rainfall followed by a half acre rent applicable only to fallow plots cultivated by the local labourers.						
On Main Line, Upper								
Nabha Branch								
Raisi P. and								
On Main Line, Lower								
Talwandi								
Gurdaspur								
Kapurthala								
Moga								
Joharwala								
Kharian								
Sialkot								
Dera								
Khushab								
Mianwali								
Margalla Hills of the Lyallpur District (dry).								
Irrigation Branch Notification No. 0245-I.L., dated 20th September 1918.	VII	Gram, village and District B land plantations—						
		For any number of waterings in the Kharif season,	1 4 0	0 10 0	Half-acre.			
		For one watering in rabi season	1 4 0	0 10 0	Do.			
		For two or more waterings in rabi season	2 8 0	1 4 0	Do.			
Irrigation Branch Notification No. 65-I.L., dated 18th January 1913.	VIII	(a) Single watering before ploughing and followed by a cross-harrowed crop in the same or the next harvest.	0 8 0	0 4 0	Acre.			
		(b) Hemp (san) and Indigo which has been ploughed as green manure before the 15th September.						

STATEMENT SHOWING OCCUPIER'S RATE IN FORCE ON THE CANALS IN THE PUNJAB DURING THE YEAR 1918-19—CONTINUED.

Authority.	Class.	Nature of crops.	RATE PER ACRE.		Per		
			Flow.	Lift.			
LOWER CHENAB CANAL.			Rs. A. P.	Rs. A. P.			
OCCUPIER'S RATE.							
<i>Applicable to—</i>							
<p>(a) all estates in the Gujranwala District which were established before the 1st January 1902;</p>							
<p>(b) all estates in the Jhang District which were established before 1st January 1892, except those which were transferred from the Montgomery to the Jhang District by Revenue and Agriculture Notification No. 370 of 6th May 1899; and such proprietary wells as are now or may hereafter be included within the boundaries of the Colony mianzai;</p>							
<p>(c) all estates in the Gujra and Faujameria Tahsils of the Montgomery District which were established by 1st January 1894; and</p>							
<p>(d) all estates in the Multan and Lahore Districts which were established before 1st April 1902;</p>							
Irrigation Branch Notification No. 017-R.I., dated 13th June 1903.	I	Sugarcane, water-nuts	8 0 0	4 4 0	Crop.		
	II	Rice	6 12 0	3 10 0	Do.		
	III	Orchards, gardens, tobacco, poppy, Indigo, drugs, vegetables, melons,	5 8 0	3 0 0	Orchards and gardens per half-year; the rest per crop.		
	IV	Cotton, fibres, dyes (other than indigo), oil-seeds, maize and all rabi corps (except gram and maseur).	4 4 0	2 6 0	Crop.		
	V	All kharif crops not otherwise specified, and gram and maseur.	3 0 0	1 12 0	Do.		
	VI	Single watering before ploughing not followed by a canal-irrigated crop in the same or next harvest.	1 12 0	1 2 0	Each watering.		
		Also crops grown on the "saddh" of a previous crop.			Crop.		
	VII	Single watering before ploughing for rabi followed by a rabi crop, to be applicable only to channels selected by the Local Government.	2 4 0	1 6 0	Acre.		
Irrigation Branch Notification No. 0161-R.I., dated 12th October 1903.	VIII	Grass— For any number of waterings in the kharif season.	1 4 0	0 10 0	Half-year.		
		For one watering in the rabi season	1 4 0	0 10 0	Do.		
		For two or more waterings in the rabi season	2 8 0	1 4 0	Do.		
		<i>Applicable to estates other than those referred to in Notification No. 017-R.I., dated 13th June 1903, above.</i>					
	I	Sugarcane	7 8 0	3 12 0	Crop.		
Irrigation Branch Notification No. 32-R.I., dated 6th January 1892.	II	Rice	6 4 0	3 2 0	Do.		
	III	Orchards, gardens, tobacco, Indigo, vegetables, poppy, diania, zira, sunn, molons,	5 0 0	2 6 0	Orchards and gardens per half-year; the rest per crop.		
	IV	Cotton, fibres, dyes (other than indigo), oil-seeds, maize and all rabi crops (except gram and maseur).	3 12 0	1 14 0	Crop.		

STATEMENT SHOWING OCCUPIER'S RATE IN FORCE ON THE CANALS IN THE PUNJAB DURING THE YEAR 1918-19—CONTINUED.

Authority.	Class.	Nature of crop.	Rate per acre.		Per
			Flow.	Lift.	
		LOWER CHENAB CANAL—continued.			
		Occupier's Rate—continued.			
	V	All flax crops not otherwise specified, and gram and mustard.	2 8 0	1 4 0	Crop.
Irrigation Branch Notification No. C36-R.L., dated 12th May 1913.	VI	Single watering before ploughing not followed by a seedbed-sown crop in the same or next harvest.	1 4 0	0 10 0	Each watering.
	VII	Any crop grown on the rank of a previous crop.			Crop.
Irrigation Branch N.O. 356, etc., No. 6141-R.L., dated 12th October 1917; No. 313-R.L., dated 10th December 1917, and No. 701-R.L., dated 11th December 1917.	VIII	Onion & Rape planted in the same fields and District P. & G. areas in the Ch. Canal For any portion of a crop grown in the 1st and 2nd L.	1 4 0	0 10 0	Half year.
		For two watered jobs in the 1st L.	1 4 0	0 10 0	Da.
		For two successive crops in the 1st L.	2 8 0	1 4 0	Da.
		<i>(See Note 1 for further particulars.)</i>			
		<i>(See Note 2 for further particulars.)</i>			
		<i>(See Note 3 for further particulars.)</i>			
		<i>(See Note 4 for further particulars.)</i>			
		<i>(See Note 5 for further particulars.)</i>			
		<i>(See Note 6 for further particulars.)</i>			
		<i>(See Note 7 for further particulars.)</i>			
		<i>(See Note 8 for further particulars.)</i>			
		<i>(See Note 9 for further particulars.)</i>			
		<i>(See Note 10 for further particulars.)</i>			
		<i>(See Note 11 for further particulars.)</i>			
		<i>(See Note 12 for further particulars.)</i>			
		<i>(See Note 13 for further particulars.)</i>			
		<i>(See Note 14 for further particulars.)</i>			
		<i>(See Note 15 for further particulars.)</i>			
Irrigation Branch Notification No. 6277-R.L., dated 20th August 1912.	Upper Gurdaspur	Flow.	0 10 0	0 10 0	
	Jhang	Flow.	1 0 0	0 10 0	
	Potohar	Flow.	1 0 0	0 10 0	
	Sialkot	Flow.	1 0 0	0 10 0	
Irrigation Branch Notification No. 912-R.L., dated 22nd January 1918.	Toura Gurdaspur	Flow.	0 10 0	0 10 0	
	Potohar	Flow.	0 10 0	0 10 0	
Irrigation Branch Notification No. C301-R.L., dated 21st September 1913.	Rohri	Orchard	—	0 10 0 and 0 10 0	
	Upper Gurdaspur	Flow.	—	0 10 0, 0 10 0, 0 10 0, 0 10 0	

STATEMENT SHOWING OCCUPIER'S RATE IN FORCE ON THE CANALS IN THE
PUNJAB DURING THE YEAR 1918. (O—CONTINUED.)

Authority.	Class.	Nature of crops.	RATE PER ACRE,		Per
			Flo. ^{w.}	Lift.	
		LOWER CHENAB CANAL—CONTINUED. OCCUPIER'S RATE—concluded. <i>Applicable to the following estates selected by the Local Government—concluded.</i>			
		Division. District. Settlement assessment circle. Nos. of Chaks and Branches.			
Irrigation Branch Notification No. 010-R. L., dated 1st June 1915.		Upper Bakers Lyallpur ... 57, 67, 107 and 108, Bakh Branch. Lyallpur ... Ditto ... 105, 211, 212, 235, 237 and 241, Bakh Branch. Jhang Jhang ... 421, 475, 476, 479, 480, 481, 151, 160, 490, 491, 498, 700, 703, 704 and 706, Jhang Branch. Burewala ... Lyallpur ... 77, 854, 851, 853, 857, 858, 815, 816, 819, 821, 823 and 825, Burewala Branch. Lower Gujrat Ditto ... 321, Gujrat Branch, Lower. Upper Gujrat Ditto ... 650, Gujrat Branch, Upper.			
Irrigation Branch Notification No. 111-R. L., dated 30th January 1912.	IV	Cotton, fibres, dyes, other than indigo, oil-seeds maize, and all rabi crops except gram and maseur	3 0 0	1 18 0	Crop.
	V	All kharif Crops not otherwise specified and gram and maseur	2 0 0	1 4 0	Do.
	UPPER JHELUM CANAL.				
	OCCUPIER'S RATE.				
Irrigation Branch Notification No. 037-R. L., dated 6th June 1916.	I	Canes and water-nuts	0 0 0	4 8 0	Crop.
	II	Rice	7 8 0	8 12 0	Do.
	III	Orchards, gardens, tobacco, poppy, indigo, drugs, vegetables, melons and wheat.	5 0 0	2 8 0	Orchards and gardens per half-year; rest per crop.
	IV	Cotton, fibres, dyes (other than indigo), oil-seeds and all rabi crops except wheat, gram, maseur, senji, malina and turnips.	4 0 0	2 0 0	Crop.
	V	All kharif crops not otherwise specified	3 0 0	1 8 0	Do.
	VI	(a) Gram, maseur, senji, turnips and malina			(a) Crop.
		(b) Crops grown on the "readhi" of a previous crop			(b) Acre.
		(c) Single waterings before ploughing for rabi followed by a rabi crop to be applicable only to the following channels:-			(c) Acre.
		Main Line, Upper Jhelum Canal.	11-R. of Machiana Khanri Distributary. 12-R. or Samanpindli Khanri Distributary. 13-R. or Saroki Khanri Distributary. 14-R. or Phalia Khanri Distributary.	2 4 0	1 2 0
		Gujrat Branch, Upper Jhelum Canal.	2-I. or Phalia Doshiukha Khanri Distributary.		
	VII	These channels will be open only between the 1st April and 15th October, both dates inclusive.			
		Grass, village and District Board plantations—For any number of waterings in the kharif season	1 4 0	0 10 0	Half-year.
		For one watering in rabi season	1 4 0	0 10 0	Do.
		For two or more waterings in rabi season	2 8 0	1 4 0	Do.

STATEMENT SHOWING OCCUPIER'S RATE IN FORCE ON THE CANALS N N THE
PUNJAB DURING THE YEAR 1918-19—CONTINUED.

Authority.	Class.	Nature of crop.	RATE PER ACRE.		Per
			Flow.	Lift.	
	VIII	UPPER JHELUM CANAL—continued. Occupier's Rate—continued.	Rs. A. P.	Rs. A. P.	
		(a) Simple watering before ploughing not followed by a canal irrigated crop in the same or next harvest.	0 8 0	0 4 0	Acre.
		(b) Hemp (jute) and jillies which have been ploughed as green manure before the 15th September.			
		LOWER JHELUM CANAL.			
		Occupier's Rate.			
Irrigation Branch Notification No. 07-R. I., dated 28th May 1912.	I	Sugarcane, water-melons	10 0 0	6 0 0	Crop.
	II	Rice	6 4 0	3 2 0	Do.
	III	Oats, oats, parrot, cotton, jute, ragi, barley, durra, pump and maize.	5 0 0	2 5 0	Oats and parrot per 1/2 acre; the rest per 1/4 acre.
	IV	Cotton, tobacco, cottonseed, jute, maize, durra, pump and maize.	2 2 0	1 1 0	Crop.
	V	All other kharif, parrot and maize, except cotton for foliage.	2 5 0	1 4 0	Do.
Irrigation Branch Notification No. 6-2-R. I., dated 12th May 1912.	VI	Simple watering before ploughing, except maize, cotton, parrot and all crops except those in Category C on the "Kharif" calendar of a first crop.	1 4 0	0 10 0	Each watering.
	VII	Simple watering before ploughing, except maize, cotton, parrot and all crops except those in Category C on the "Kharif" calendar of a first crop.	2 8 0	1 4 0	Crop.
Irrigation Branch Notification No. 012-R. I., dated 28th October 1912, No. 710-R. I., dated 1st December 1912, and No. 017-R. I., dated 11th December 1912.	VIII	Grass, rape, plantain, etc. in the Kharif and parrot in the Rabi.— For any number of waterings in the Rabi.— For one watering in parrot season	1 4 0	0 10 0	No. 1 year.
		For one or more waterings in the rabi season	1 4 0	0 10 0	Do.
		After one or more waterings in the rabi season	2 5 0	1 4 0	Do.
		APPENDIX.—			
		(1) All villages in the Khidir Taluk, except those in the Khidir Taluk in the Kharif District.			
		(2) All villages in the Sialkot, Tandoi, except Sial, Mianwali and Wazirabad, and except all villages in a series of villages situated from the Sialkot District including the Sialkot District and Gujrat District Taluk.			
		(3) The following villages in the Sargodha Taluk:—			
		Northern Branch Chals— Nos. 47, 63, 81, 95, 103, 104, 105, 108, 110, 112, 115 to 174 inclusive.			
		Southern Branch Chals— Nos. 60, 61, 63, 131, 133, 134, 135, 137 to 141 inclusive and Chak Jatt on the Khidir District.			
Irrigation Branch Notifications No. 409-R. I., dated 29th March 1912, and No. 438-R. I., dated 3rd April 1912.	I	Sugarcane and water-melons	7 8 0	3 12 0	Crop.

STATEMENT SHOWING OCCUPIER'S RATE IN FORCE ON THE CANALS IN THE PUNJAB DURING THE YEAR 1918-19.

Authority.	Class.	Nature of crops.	RATE PER ACRE.		Per			
			Flow.	Lift.				
LOWER JHELUM CANAL—CONCLUDED.								
OCCUPIER'S RATE—concluded.								
II	Rice	... ... ... ...	4 0 0	2 0 0	Crop.		
III	Orchards, gardens, indigo, vegetables, drugs and melons.		5 0 0	2 8 0	Orchards and gardens per half-year; the rest per crop.			
IV	Wheat	... ... ...	3 4 0	1 10 0	Crop.		
V	Cotton and oilseeds	... ...	3 0 0	1 8 0	Do.		
VI	Fibres (other than cotton), dyes (other than indigo), maize and all rabi crops other than wheat, gram and masur.		2 8 0	1 4 0	Do.			
VII	All other kharif crops, gram, masur and all crops grown for fodder (including turnips)		2 0 0	1 0 0	Do.			
VIII	Single watering before ploughing not followed by a canal-irrigated crop in the same or next harvest.		1 4 0	0 10 0	Each watering.			
	Crops grown on "wadi" or moisture of a previous crop.				Crop.			
IX	Single watering before ploughing for rabi followed by a rabi crop, to be applicable only to channels selected by the Local Government.		2 8 0	1 4 0	Crop.			
X	Grass, village plantations in Colony villages and District Board plantations in the Colony—							
	For any number of waterings in the kharif season.		1 4 0	0 10 0	Half-year.			
	For one watering in the rabi season	...	1 4 0	0 10 0	Do.			
	For two or more waterings in the rabi season.		2 8 0	1 4 0	Do.			
UPPER SUTLEJ INFUNDATION CANALS INCLUDING LOWER SOHAG AND PARA CANALS.								
OCCUPIER'S RATE.								
<i>Lahore and Montgomery Districts.</i>								
Irrigation Branch Notification No. 632 R.I., dated 1st May 1918.	I	Rice, gardens, pepper, cane	3 8 0	1 12 0	Acre.			
	II	Cotton, melons, til and hemp	2 12 0	1 6 0	Do.			
	III	All other kharif crops	1 12 0	0 14 0	Do.			
	IV	Grasses and failed rabi crops	0 8 0	0 4 0	Do.			
	V	All other crops	1 4 0	0 10 0	Do.			
SIDHNAI CANALS.								
WATER-RATE.			Rate per acre.					
<i>Kabirwala and Multan Tahsils.</i>								
Punjab Civil (Revenue) Department letter No. 209, dated 11th December 1892.	I	Rice, fruits and vegetables, pepper, cotton, til, sugarcane, wheat and tobacco.	3 5 0					
	II	Other kharif crops	2 6 0					
	III	Other rabi crops	2 2 0					
	NOTE.—"Lift" rates to be half the "flow" rates.							

STATEMENT SHOWING OCCUPIER'S RATE IN FORCE ON THE CANALS IN THE PUNJAB DURING YEAR 1918-19—CONTINUED.

Authority.	Class.	Nature of crop.	RATE PER ACRE.		Per			
			Plow.	LHL.				
			Rs. a. p.	Rs. a. p.				
LOWER SUTLEJ INUNDATION CANALS.								
<i>OCCUPIER'S RATE.</i>								
<i>Mailsi Canal and Branches; Muhawar Canal, Rambagh and Branches; Balakot, Jallianwala and Linsley.</i>								
Irrigation Branch Notification No. 1040-L. I., dated 14th February 1903.	I	Rice, gardens and pepper	... 2 4 0	1 11 0	Acre of natural crop.			
	II	Cotton, sugarcane and till	... 1 12 0	1 5 0	Ditto.			
	III	Other Kharif crops	... 1 8 0	1 2 0	Ditto.			
	IV	Rabi crops ...	0 14 0	0 10 0	Ditto.			
Note.—Irrigation on grass land may be assessed at half rates at the discretion of the Deputy Commissioner.								
CHENAB INUNDATION CANALS.								
<i>OCCUPIER'S RATE.</i>								
<i>Gajjal, Ravi, Sutlej, Sialkot, Jhelum and Potohar Canals.</i>								
Irrigation Branch Notification No. 2180-L. I., dated 9th November 1912.	I	Rice, gardens and pepper	... 2 4 0	1 11 0	Acre of natural crop.			
	II	Cotton, sugarcane and till	... 1 12 0	1 5 0	Ditto.			
	III	Other Kharif crops	... 1 8 0	1 2 0	Ditto.			
	IV	Rabi crops ...	0 14 0	0 10 0	Ditto.			
Note.—Irrigation on grass land may be assessed at half rates at the discretion of the Deputy Commissioner.								
<i>Maleri, Bikaner, Tarnow and Hoshi Mohan Canal.</i>								
Irrigation Branch Notification No. 01325-L. I., dated 25th September 1900.	I	Rice, gardens and pepper	... 2 4 0	1 11 0	Acre of natural crop.			
	II	Cotton, sugarcane and till	... 1 12 0	1 5 0	Ditto.			
	III	Other Kharif crops	... 1 8 0	1 2 0	Ditto.			
	IV	Rabi crops ...	0 14 0	0 10 0	Ditto.			
Note.—Irrigation on grass land may be assessed at half rates at the discretion of the Deputy Commissioner.								
HAJIWAH CANAL.								
Irrigation Branch Notification No. 266-L. I., dated 1st November 1905.	II	In exercise of the power conferred by Section 29 (1) of the Punjab Major Canals Act, 1905, (Punjab Act III of 1905), His Honour the Lieutenant-Governor is pleased to direct that for all irrigation from the Hajiwah Canal the following rates shall be levied per acre actually irrigated, namely:—						
	I	Rice, gardens and pepper	... 2 4 0	1 11 0				
<i>WATER RATE.</i>								
	I	Rice, gardens and pepper	... 2 4 0	1 11 0				
	II	Cotton, sugarcane and till	... 1 12 0	1 5 0				

STATEMENT SHOWING OCCUPIER'S RATE IN FORCE ON THE CANALS IN THE PUNJAB DURING THE YEAR 1918-19—CONTINUED.

Authority.	Class.	Nature of crops.	RATE PER ACRE.		Per			
			Flow.	Lift.				
			Rs. A. P.	Rs. A. P.				
HAJIWAII CANAL—CONCLUDED.								
WATER RATE—concluded.								
III	Other kharif crops	1 6 0	1 2 0				
IV	Rabi crops	0 14 0	0 10 0				
	<p>Provided that on all irrigation, within the original grant of land made in the year 1880 to the late Ghulam Kadir Khan, of lands, the proprietary right in which is or may hereafter become vested—</p> <ul style="list-style-type: none"> (a) In the sons of lineal descendants of the said Ghulam Kadir Khan; or (b) in Mian Mohammad Khan or Hafiz Mohammad Afzal Khan, the nephews of the said Ghulam Kadir Khan or their lineal descendants; <p>the rate per acre actually matured whether in the kharif or rabi shall be limited to the following rates, namely :—</p> <table style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align:center;">Rs. A. P.</th> </tr> </thead> <tbody> <tr> <td style="text-align:center;">Flow 0 12 0 per acre.</td> </tr> <tr> <td style="text-align:center;">Lift 0 9 0 "</td> </tr> </tbody> </table>					Rs. A. P.	Flow 0 12 0 per acre.	Lift 0 9 0 "
Rs. A. P.								
Flow 0 12 0 per acre.								
Lift 0 9 0 "								
Irrigation Branch Notification No. 262-R.I., dated 16th November 1905.		In exercise of the power conferred by Section 29 (1) of the Punjab Minor Canals Act (Punjab Act III of 1905), the Lieutenant-Governor is pleased to direct that the following rates shall be levied on the Hajiwah Canal in the Multan and Montgomery Districts, for the supply of water for purposes other than irrigation, viz.:—						
					Rate,			
		<i>Purpose for which supplied.</i>			Rs. A. P.			
		Brick-making and pise wall building	...	0 8 0	100 cubic foot.			
		Laying concrete or brick or stone masonry	...	0 2 0	Ditto.			
		Metalling road	...	10 0 0	Mile.			
		Water supplied in bulk	...	1 0 0	2,500 cubic foot.			
		Watering roadside or avenue trees	...	2 8 0	Canal mile of 5,000 feet for kharif crop.			
				5 0 0	Canal mile of 5,000 feet for rabi crop.			
Irrigation Branch Notification No. 0235-R.I., dated 19th September 1906.		PROVISO.—Except within the limits of Civil Stations, Cantonments and Municipalities no charge shall be made for water used for the manufacture of bricks not subsequently burnt in a kiln or for pise wall building, if taken from a water-course or tank lawfully supplied from a canal, and no rate shall be levied for water supplied in bulk, under proper authority to village tanks exclusively used for domestic purposes or for watering cattle.						
Irrigation Branch Notification No. 100-R. I., dated 30th January 1912.								

STATEMENT SHOWING OCCUPIER'S RATE IN FORCE ON THE CANALS IN THE PUNJAB DURING THE YEAR 1918-19—CONTINUED.

Authority,	Class,	Nature of crop.	RATE PER ACRE.		Per
			Flow.	Lift.	
		INDUS INFUNDATION CANALS.	Re. A. R.	Rs. A. R.	
		OCCUPIER'S RATE.	On the Kotla Canal.	On all other canals.	
			Re. A. R.	Rs. A. R.	
Indrig. & Irrig. Branch Jl. No. 6-74-R.D., dated 2nd Oct. 1918.	...	Rice & Paddy	1 8 0	1 0 0	
		" " Lift	0 12 0	0 8 0	
		Potato	0 12 0	0 8 0	
		" " Lift	0 6 0	0 4 0	
		Rate per acre in the Dera Ghazi Khan and Jhang districts	.. .. .. ..	1 1 0	
		Periodical rates will be deducted from the Monthly Rent paid in the districts of Dera Ghazi Khan and Jhang districts except for the period of inundation or for the period from the date of the opening of the Main Canal to the date of the closing of the Main Canal, whichever is earlier, and for the period of one month after the closing of the Main Canal.	.. .. .. ..	.. .. .. ..
		Periodical rates will be deducted from the Monthly Rent paid in the districts of Dera Ghazi Khan and Jhang districts except for the period of inundation or for the period from the date of the opening of the Main Canal to the date of the closing of the Main Canal, whichever is earlier, and for the period of one month after the closing of the Main Canal.	.. .. .. ..	.. .. .. ..
Irrigation Branch, No. 17, and Jl. No. 1379-R, dated 4th October 1918.	...	Inundation of the paddy covered by section 25 of the North-West Frontier Province Act, VIII of 1872, as amended by act IV of 1914, the Indus irrigation system of the Punjab and to deduct the period of inundation from the Dera Ghazi Khan Main Supply Canal, starting from the Main Canal of the Indus irrigation system other than the Indrig. & Irrig. Branch.	Re. A. R.	Rs. A. R.	
		All crops	6 0 0	6 0 0	Acre.
		Rate per acre for paddy after inundation.			
		Bh. Larking and pithwall building	0 3 0	17 cents/ft.	
		Laying concrete and brick concrete masonry	0 2 0	Dollars	
		Metallic roofs	10 0 0	Miles	
		Water supplied in bulk	1 0 0	2,500 cubic feet.	
		Watering tanks/irrigation tanks	5 0 0	Canal mile of 2,000 feet per acre.	
		SHAHPUR (IMPERIAL) INFUNDATION CANALS.			
		OCCUPIER'S RATE.			
		For the Canals in Shahpur and Bhera Talukas.	Re. A. R.	Rs. A. R.	
Irrigation Branch Notifica- tion No. 1379-I, dated 19th November 1918.	...	Rice	3 5 0	1 4 0	Acre.
		All other crops	2 8 0	1 6 0	Ds.
		Grasslands	1 4 0	1 4 0	Ds.

STATEMENT SHOWING OCCUPIER'S RATE IN FORCE ON THE CANALS IN THE PUNJAB DURING THE YEAR 1918-19.—CONTINUED.

Authority.	Class.	Nature of crops.	RATE PER ACRE.		Per.
			Flow.	Lift.	
		SHAHPUR (PROVINCIAL) INUNDATION CANALS.			
		OCCUPIER'S RATE.			
		Ranikhal.			
Settlement Report, 1887—1894, paragraph 100.	...	Rice	3 8 0	1 4 0	Acre.
		All other crops	2 8 0	1 4 0	Do.
		Grass lands	1 4 0	1 4 0	Do.
		Cordynwah.			
		All crops	1 8 0	0 12 0	Acre.
		Grass lands	0 2 0	0 1 0	Do.
		MUZAFFARGHAR INUNDATION CANALS.			
		OCCUPIER'S RATE.			
		Chenab Canals.			
Irrigation Branch Notifications No. 082-R. I., dated 7th July 1903, and No. 100-R. I., dated 2nd February 1910.	I	Rice, gardens and popper	2 12 0	1 6 0	Acre of matured crop.
	II	Cotton, sugarcane and indigo	1 8 0	0 12 0	Ditto.
	III	Other kharif crops	1 2 0	0 9 0	Ditto.
	IV	Rabi crops	0 12 0	0 6 0	Ditto.
	V	Grass lands	0 6 0	0 3 0	Ditto.
Irrigation Branch Notification No. 434-R. I., dated 4th May 1907.		NOTE.—The rate for grass lands to be assessed at the discretion of the Deputy Commissioner.			
		Indus Canals.			
Irrigation Branch Notifications No. 052-R. I., dated 7th July 1903, and No. 100-R. I., dated 2nd February 1917.	I	Rice, gardens and pepper	2 0 0	1 0 0	Acre of matured crop.
	II	Cotton, sugarcane and indigo	1 0 0	0 8 0	Ditto.
	III	Other kharif crops	0 12 0	0 6 0	Ditto.
	IV	Rabi crops	0 8 0	0 4 0	Ditto.
	V	Grass lands	0 4 0	0 2 0	Ditto.
Irrigation Branch Notification No. 434-R. I., dated 4th May 1907.		NOTE.—The rate for grass lands to be assessed at the discretion of the Deputy Commissioner.			
		GHAGGAR INUNDATION CANALS (BRITISH).			
		OCCUPIER'S RATE.			
Irrigation Branch notification No. 343-R. I., dated 27th November 1903.	I	Sugarcane	8 8 0	4 4 0	Acre matured per crop.
	II	Rice and water-nuts	8 0 0	8 0 0	Ditto.
	III	All other crops	2 8 0	1 4 0	Ditto.
		PROVISO.—Provided that no occupier's rates shall be levied in respect of any land for the time being assessed to fluctuating land revenue.			
		DELHI AND GURGAON WORKS.		Rate per acre.	
		OCCUPIER'S RATE.			
Irrigation Branch Notification No. 653-I., dated 6th April 1898.	...	All crops	0 6 4½	Acre.	
		Grass	0 8 8½	Do.	
		NOTE.—This schedule is the same as that published in Notification No. 5253-I., dated 8th December 1878, which is hereby superseded.			

STATEMENT SHOWING OCCUPIER'S RATE IN FORCE ON THE CANALS IN THE PUNJAB DURING THE YEAR 1918-19—CONCLUDED.

Authority.	Class.	Nature of crop.	RATE PER ACRE.		Per
			Flow.	Lift	
		DELHI AND GURGAON WORKS — CONCLUDED. OCCUPIER'S RATE—concluded.	Rs. A. T.	Rs. A. T.	
		SCHEDULE OF RATES FOR SUPPLY OF WATER FOR PURPOSES OTHER THAN IRRIGATION.			
		WESTERN JUMNA CANAL, UPPER BARI DOB CANAL, SURIND CANAL, LOWER CHENNAI CANAL, UPPER JHETTA CANAL, LOWER JHETTA CANAL, UPPER CHENNAI CANAL, LOWER BARI DOB CANAL, UPPER SETIYA CANAL, LOWER SONA AND PABA CANAL, SIRHAI AND SUB-SIRHAI CANALS, LOWER SETIYA AND CHENNAI CANALS, JALGAON CANAL, MIRzapur CANAL, SHARJAH CANAL.			
Irrigation Branch Notice No. 151-I, dated 1st April 1918, 170-R. I., dated 16th November 1918, 540-R. I., dated 2nd April 1919, Ch. 7 R. I., dated 23rd June 1918, and 624-R. I., dated 11th September 1918.	..	Brickwork, and plain wall building ..	6 3 0	100 cubic feet.	
		Laying concrete or brick courses as per ..	6 3 0	Brick.	
		Masonry walls	12 0 0	M. W.	
		Water supply in tank	1 0 0	250 cubic feet.	
Irrigation Branch Notice No. 152-I, dated 26th October 1918.	..	Water supply in tanks & reservoirs	2 5 0	Canal rate of 1000 F. t. c. f. - 1000 F. t. c. Canal rate of 2,600 F. t. c. for smaller j.	
Irrigation Branch Notice No. 153-I, dated 28th September 1918.	..	Extraction—Pump within the limits of Canal stations, Conveyances and Reservoirs in charge of which made for water supply to canal areas of tanks and reservoirs, tank areas of irrigation and supply of water from such reservoirs and for supply of water for agriculture.	2 0 0		
Irrigation Branch Notice No. 154-I, dated 20th September 1918.	..				

PUNJAB PROVINCE.

IRRIGATION BRANCH.

ADMINISTRATIVE ACCOUNTS

FOR THE YEAR

1918-19.

No. Irr. 15-4—

dated _____ 1920;

Copy forwarded to

F. DUKOFF GORDON,
Accountant-General, Punjab;

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IRRIGATION BRANCH.

2
OFFICE OF
ADMINISTRATIVE ACCOUNTSNo. 1.—General Abstract of Financial Results showing the Estimated Cost of Construction
and the Interest on the Debt incurred in respect

Name of Project.	ESTIMATED COST OF CONSTRUCTION.			CAPITAL OUTLAY INCLUSIVE OF INDIRECT			
	Direct charges.	Indirect charges.	Total.	During 1918-19			To end of
				5	6	7	
1	2	3	4				8
PRODUCTIVE WORKS.							
<i>Canals in Operation.</i>							
<i>Imperial</i>							
Western Jumna Canal	... ..	1,66,07,231	8,10,053	17,175,313	10,292	- 135	10,167
Upper Bari Doab Canal	... ..	2,07,46,506	7,38,620	2,15,27,216	5,64,114	365	5,64,470
Sirhind Canal	... ..	2,12,64,621	12,12,408	2,54,79,229	57,406	68	57,474
Lower Chenab Canal	... ..	3,18,51,795	7,70,371	3,26,30,766	-23,594	239	-22,355
Upper Sutlej Inundation Canal, including Lower Sohg and Paro.	16,95,078	101,041	17,07,019	-5,027	..	-5,027	17,11,275
Sidhuani Canal	.. ..	12,17,714	40,225	12,57,939	-1,753	..	-1,553
Lower Jhelum Canal	.. ..	1,60,05,546	4,04,608	1,65,04,254	436,211	16,230	4,62,150
Indus Inundation Canals	.. ..	28,47,297	80,185	20,29,642	1,077	-13	982
Upper Chenab Canal	.. ..	3,41,46,933	9,97,875	3,51,14,808	-8,151	2,117	-6,037
Lower Bari Doab Canal	.. ..	2,13,14,108	1,75,387	2,17,89,703	1,75,827	8,822	1,84,640
Upper Jhelum Canal	.. ..	4,30,10,774	9,12,452	4,30,23,226	-68,360	30,519	-37,840
TOTAL CANALS IN OPERATION—IMPERIAL	21,39,25,734	65,56,544	22,04,82,278	11,48,168	58,215	12,06,387	21,79,53,180
<i>Contribution</i>							
Western Jumna Canal	[... ..	11,60,478	..	11,60,478	..	..	11,60,478
Sirhind Canal	... ..	1,63,18,817	...	1,63,18,817	1,170	..	1,170
TOTAL CANALS IN OPERATION, CONTRIBUTION	1,64,70,205		1,64,70,205	1,170	..	1,170	1,64,81,914

LAHORE:

The 5th September, 1919.

ACCOUNTANT-GENERAL.

PUNJAB PROVINCE.

FOR THE YEAR 1918-19.

Minor Works, the Capital outlay thereon, the Revenue derived therefrom, the working expenses, of 1918-19.

DURING 1918-19.						WORKING EXPENSES AND MAINTENANCE DURING 1918-19 INCLUSIVE OF INDIRECT CHARGES, NOS. 3 AND 5.			NET RESULTS, EXCLUDING INTEREST DIFFERENCE BETWEEN REVENUE AND WORKING EXPENSES.						NET RESULTS INCLUDING INTEREST.					
Collected with Land Revenue.			Total.						Direct charges.			Indirect charges.			Excess revenue (surplus),			Rate per cent.		
Actual transactions of the year.	Adjustment on account of previous year.	Total.	Actual transactions of the year.	Adjustment on account of previous year.	Total.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rate per cent.		
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.															
20,618	...	20,618	82,007	...	82,007	50,464	4,546	64,010	18,087	...	8·04	...	...	...	...	...	...
...	12,277	...	12,277	10,296	1,493	20,701	...	8,514	...	2·21	...	...	...	...	...	...
20,618	...	20,618	86,374	...	86,374	78,762	6,039	84,801	18,087	8,514	1·37	...	...	...	...	...	...	...
...	2,859	...	2,859	...	2,859	...	0·00	...	...	...	...	...	...
2,77,755	...	2,77,755	5,30,714	...	5,30,714	3,20,762	18,200	3,45,000	1,01,712	...	...	...	...	...	...	...	...	...
2,65,745	...	2,65,745	4,77,702	...	4,77,702	1,60,35	10,293	1,75,651	3,02,111	...	...	...	...	...	...	...	...	...
3,71,778	...	3,71,778	6,40,121	...	6,40,121	3,22,187	10,185	3,41,372	2,08,749	...	...	...	...	...	...	...	...	...
9,18,278	...	9,18,278	16,54,607	...	16,54,607	8,14,287	47,738	8,62,026	7,02,612	...	...	...	...	...	...	...	...	...
12,130	...	12,130	41,014	...	41,014	30,205	2,754	30,019	2,505	...	...	...	...	...	...	...	...	...
12,130	...	12,130	41,014	...	41,014	30,205	2,754	30,019	2,505	...	...	...	...	...	...	...	...	...

F. DUKOFF GORDON.

Accountant-General, Punjab.

IRRIGATION BRANCH.

OFFICE OF

ADMINISTRATIVE ACCOUNTS

Western Jumna Canal

No. 2.—CAPITAL ACCOUNTS FOR

HEADS OF ACCOUNTS.	DIRECT CHARGES.								Total amount debited to account as above and amount credited to account as above in the year ending 31st March, 1911. Excess or deficit balance on 31st March, 1911.	
	Irrigation			Construction			Total			
	Provision	17/1/12	Total	Provision	17/1/12	Total	Provision	17/1/12	Total	
I.—WORKS.										
1.—Bridges Works—										
<i>A.—Land</i>	4,672	...	4,672	...	...	...	2,621	...	2,621	
<i>C.—Works</i>	4,10,441	...	4,10,441	1,17	1,17	1,17	4,09,724	...	4,09,724	
<i>K.—Buildings</i>	42,511	...	42,511	...	...	...	42,511	...	42,511	
<i>O.—Miscellaneous</i>	12,571	...	12,571	...	...	...	12,571	...	12,571	
<i>P.—Maintenance</i>	28,450	...	28,450	...	...	...	28,450	...	28,450	
Total	50,183	...	50,183	1,17	1,17	1,17	49,161	...	49,161	
2.—Main Canal & Branches—										
<i>A.—Preliminary Expenses</i>	2,131	...	2,131	1,17	1,17	1,17	2,131	...	2,131	
<i>B.—Land</i>	2,6,212	—5,652	2,57,562	22,77	22,77	22,77	240,371	—112	240,259	
<i>D.—Regulations</i>	2,44,051	...	2,44,051	21,27	21,27	21,27	225,772	...	225,772	
<i>E.—Tolls and Weirs</i>	2,61,19	...	2,61,19	22,77	22,77	22,77	243,220	...	243,220	
<i>F.—Rivers and Hill Torrent Works</i>	2,22	...	2,22	1,17	1,17	1,17	2,22	...	2,22	
<i>P.—(1)—Other Drainage Works</i> Cr/R	2,22,612	...	2,22,612	11,17	11,17	11,17	201,371	...	201,371	
<i>G.—Bridges</i>	2,27,612	...	2,27,612	61,17	61,17	61,17	247,371	...	247,371	
<i>H.—Tolls</i>	2,49,441	...	2,49,441	12,31	12,31	12,31	237,120	...	237,120	
<i>I.—Navigational Works</i>	17,571	...	17,571	1,17	1,17	1,17	16,411	...	16,411	
<i>J.—Mills</i>	28,112	...	28,112	2,27	2,27	2,27	26,835	...	26,835	
<i>K.—Buildings</i>	2,70,372	1,92	2,70,372	1,17	1,17	1,17	21,172	1,17	22,349	
<i>L.—Earthwork</i>	10,01,171	...	10,01,171	1,17	1,17	1,17	9,891	...	9,891	
<i>M.—Plantations</i>	10,172	...	10,172	1,17	1,17	1,17	9,991	...	9,991	
<i>O.—Miscellaneous</i>	24,259	...	24,259	2,27	2,27	2,27	23,980	...	23,980	
<i>P.—Maintenance</i>	1,57,112	...	1,57,112	1,17	1,17	1,17	1,57,000	...	1,57,000	
Total	1,41,271	...	1,41,271	1,17	1,17	1,17	1,37,342	...	1,37,342	
3.—Distributaries—										
<i>A.—Preliminary Expenses</i>	65,020	...	65,020	12,77	12,77	12,77	52,950	...	52,950	
<i>B.—Land</i>	7,10,412	...	7,10,412	6,052	6,052	6,052	5,17,617	...	5,17,617	
<i>C.—Works</i>	11,57,719	...	11,57,719	130,12	130,12	130,12	10,39,747	...	10,39,747	
<i>E.—Earthwork</i>	13,05,277	...	13,05,277	1,63,612	1,63,612	1,63,612	12,70,869	...	12,70,869	
<i>O.—Miscellaneous</i>	3,55,870	...	3,55,870	29,37	29,37	29,37	4,16,227	...	4,16,227	
<i>P.—Maintenance</i>	54,911	...	54,911	12,77	12,77	12,77	67,801	...	67,801	
Total	31,12,693	...	31,12,693	3,55,870	3,55,870	3,55,870	37,71,044	...	37,71,044	

ACCOUNTANT-GENERAL,

PUNJAB PROVINCE,

FOR THE YEAR 1918-19.

Project.

AND TO END OF 1918-19.

HEADS OF ACCOUNT.	DIRECT CHARGES.									Cost of construction as now estimated (Com- mencing on 31st March 1895.)	Expenditure against estimated Estimates. Rs.		
	IMPERIAL.			CONTRIBUTION.			TOTAL.						
	Previous.	1918-19.	Total.	Previous.	1918-19.	Total.	Previous.	1918-19.	Total.				
4.—DRAINAGE AND PROTECTIVE WORKS—													
A.—Preliminary Expenses.	Rs. 20,301	... 20,301	Rs. 20,301	Rs. 1	... 1	Rs. 1	Rs. 20,302	... 20,302	Rs. 20,302				
B.—Land	59,225	... 59,225	Rs. 59,225	... 59,225	... 59,225	Rs. 59,225	... 59,225	... 59,225	Rs. 59,225				
C.—Works	2,08,426	... 2,08,426	Rs. 2,08,426	... 2,08,426	... 2,08,426	Rs. 2,08,426	... 2,08,426	... 2,08,426	Rs. 2,08,426				
D.—Earthwork	4,27,464	... 4,27,464	Rs. 4,27,464	3,113	... 3,113	Rs. 3,113	4,30,577	... 4,30,577	Rs. 4,30,577				
E.—Miscellaneous	22,647	... 22,647	Rs. 22,647	... 22,647	... 22,647	Rs. 22,647	... 22,647	... 22,647	Rs. 22,647				
	TOTAL ...	7,38,063	... 7,38,063	3,113	... 3,113	Rs. 7,41,177	... 7,41,177	... 7,41,177	Rs. 7,41,177				
TOTAL I.—WORKS.	1,12,10,304	—3,057	1,12,07,307	9,00,640	... 9,00,640	Rs. 1,21,11,004	—3,057	1,21,07,947	Rs. 1,21,07,947				
Add expenditure on general works at end of 1894-95.	19,24,123	...	19,24,123	...	...	19,24,123	...	19,24,123	Rs. 19,24,123		
	TOTAL ...	1,31,34,487	—3,057	1,31,31,430	9,00,640	... 9,00,640	1,40,36,127	—3,057	1,40,32,070	Rs. 1,40,32,070			
II.—ESTABLISHMENT.													
5. DIRECTION (a)	6,00,581		6,08,613	43,545	... 43,545	Rs. 6,53,126			Rs. 6,52,168				
6. EXECUTIVE	24,01,205	—968	24,01,205	1,57,882	... 1,57,882	25,59,087			25,59,087				
8. SPECIAL SURVEY.	1,31,782		1,31,782	6,066	... 6,066	1,37,848	—968	1,37,848					
8½. SPECIAL FIELD SURVEY.	86		86	...	...	86	86	86	Rs. 86		
LEAVE AND PENSION ALLOWANCES.	...	...	...	20,040	... 20,040	20,040	...	20,040	Rs. 20,040		
	TOTAL ...	31,42,656	—968	31,41,688	2,36,512	... 2,36,512	33,79,108	—968	33,78,230				
Add expenditure on general works at end of 1894-95.	1,85,690	...	1,85,690	...	...	1,85,690	...	1,85,690	Rs. 1,85,690		
	TOTAL ...	33,28,216	—968	33,27,278	2,36,512	... 2,36,512	35,64,788	—968	35,63,820	Rs. 35,63,820			
III.—TOOLS AND PLANT.													
1. Scientific Instruments	...		...	...	...	...	...	...
2. Plant and Machinery	...		...	...	...	...	...	...
3. Tools	...		...	...	...	...	...	...
4. Navigation Plant	1,933		20K			2,231							
5. Camp Equipment	...	—46	2,18,004	...	...	...	—46	2,41,772			
6. Livestock	...		...	...	...	...	
7. Office Furniture	...		...	...	...	...	
8. Repair and Carrington	23,973		5,041			29,014							
12. Miscellaneous	1,92,144		18,420			21,573							
	TOTAL ...	2,18,060	—46	2,18,014	2,768	... 2,768	2,41,818	—46	2,41,772	Rs. 2,41,772			
IV.—SUSPENSE ACCOUNT.													
14. STOCK	2,13,047	23,427	2,36,474	...	...	...	2,13,047	23,427	2,36,474		
15. STOCK PURCHASE.	—311	—4,271	—4,562	...	...	...	—311	—4,271	—4,562		
18d. STOCK SALES	35	465	500	1	...	...	35	465	500		
16. MISCELLANEOUS ADVANCES	239	3,742	3,081	...	...	...	239	3,742	3,081		
	TOTAL ...	2,13,010	—23,363	2,36,379	...	...	2,13,010	—23,363	2,36,379		
GRAND TOTAL ...	1,08,82,312	19,292	1,60,13,065	11,00,950	... 11,00,950	1,80,54,743	10,292	1,80,74,036	1,78,37,662	1,78,37,662			
V.—LESS RECEIPTS ON CAPITAL ACCOUNT.													
NET TOTAL ...	1,08,82,312	19,292	1,60,01,004	11,00,478	... 11,00,478	1,80,42,700	10,292	1,80,62,082	1,78,25,700	1,78,25,700			
VI.—APPORTIONMENT.													
49.—IRRIGATION Works	1,08,82,312	19,292	1,60,01,004	11,00,478	... 11,00,478	1,80,42,700	10,292	1,80,62,082	1,78,25,700	1,78,25,700			

(a) Share of accounts excluded under Imperial from 1912-13 to 1917-18.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Western Jumna Canal Project.

No. 3. REVENUE ACCOUNTS FOR AND TO END OF 1918-19.

Buckets	INTERIM			CONTINUATION			TOTAL		
	Previous	1918-19	Total	Previous	1918-19	Total	Previous	1918-19	Total
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Dividends rates	..	21,90,617	..	..	..	..	..	..	..
Bank charges	..	2,125	..	..	..	..	..	..	..
Interest on loan from Govt.	..	1,75,000	..	..	..	..	..	..	..
Report from Govt. on Irrigation	..	521	..	..	..	..	..	..	..
Water power	..	2,471	..	..	..	..	..	..	..
Services & Repairs	..	1,11,137	..	..	..	..	..	..	..
Cost of Buildings	..	7,12	..	..	..	..	..	..	..
Taxes	..	1,220	..	..	..	..	..	..	..
Miscellaneous and other expenses	..	12,173	..	..	..	..	..	..	..
Total	..	10,20,10,833	26,57,231	16,22,57,142	5,771	1,087	7,858	10,20,10,833	26,57,231
Balance of last year's revenue carried forward in the Civil Project account	..	1,02,37,456	2,14,40	1,04,51,861	..	..	..	1,02,37,456	2,14,40
Interest on the pro- ceeds of water loan from Govt.	..	1,002	205	2,293	..	..	..	1,002	205
Total	..	1,02,38,458	2,16,701	1,04,54,154	..	..	..	1,02,38,458	2,16,701
Total Buckets	..	12,22,79,905	(d) 25,16,072	12,81,85,977	15,771	1,282	37,051	12,23,15,712	28,77,381

(d) Rs. 6,19,270 more would have been earned had not Owners' rates on certain lands irrigated resulted in favour of Revenue assignees.

IRRIGATION BRANCH.

PUNJAB PROVINCE

OFFICE OF ACCOUNTANT-GENERAL,
ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Western Jumna Canal Project.

No. 3.—REVENUE ACCOUNTS FOR AND TO END OF 1918-19.

CHARGES.	IMPERIAL.			CONTRIBUTION.			TOTAL.		
	Previous.	1918-19.		Previous.	1918-19.		Previous.	1918-19.	
		Rs.	Rs.	Total.	Rs.	Rs.		Rs.	Rs.
(1)—EXTENSIONS AND IMPROVEMENTS.									
(1)—HEAD WORKS.	4,06,190	9,882	2,16,172	14,010	823	16,741	2,21,100	10,807	2,31,913
(2)—MAIN CANAL AND BRANCHES.	11,10,600	23,338	14,33,924	2,70,010	(a) 18,804	2,80,529	10,81,336	42,103	17,23,523
(3)—DISTRIBUTARIES	8,10,351	68,900	8,75,310	56,513	..	60,613	8,72,872	66,809	10,31,771
(4)—DRAINAGE AND PROTECTIVE WORKS.	76,084	4,566	89,651	2,610	89	2,729	75,728	4,656	83,383
TOTAL I. A. ..	25,09,297	96,780	26,06,083	3,94,744	10,708	2,61,512	23,54,041	1,16,651	29,70,695
(2)—MAINTENANCE AND REPAIRS.									
(1)—HEAD WORKS	10,12,807	69,563	10,72,460	83,275	4,761	93,035	20,01,171	61,824	20,65445
(2)—MAIN CANAL AND BRANCHES.	80,81,198	2,72,851	83,57,382	4,93,005	18,814	5,02,219	85,08,103	2,91,528	8,59,031
(3)—DISTRIBUTARIES	46,00,132	1,80,694	46,02,816	1,71,210	..	1,71,219	46,77,351	1,86,684	45,64,035
(4)—DRAINAGE WORKS.	6,45,027	25,201	6,71,231	21,963	961	22,624	6,67,900	20,265	6,94,163
TOTAL I. B. ..	1,61,40,461	6,44,426	1,60,83,589	7,66,061	21,360	7,80,427	1,69,14,826	5,08,791	1,61,33,316
(3)—COMPENSATION.	1,12,275	1,370	1,13,446	2,091	93	2,784	1,14,906	1,463	1,10,429
(4)—ESTABLISHMENT.									
(5)—DIRECTION AND ACCOUNT.	22,20,163			99,629			23,21,732		
(6)—EXECUTIVE ESTABLISHMENT	4,00,422	1,13,46,027	(c) ..		14,301	4,82,546		1,14,913	1,19,23,576
(7)—MEDICAL DO.	67,19,502			3,60,428			90,88,930		
(7A)—REVENUE DO.	65,07,503	(b) 2,03,670	68,31,254	1,38,748		1,98,748	67,36,261	2,03,670	69,80,003
(7B)—NAVIGATION ESTABLISHMENT.	18,168		..	..	..	..	18,168		
(7C)—PLANTATION ESTABLISHMENT.	700	..	..	..	..	..	700	..	..
(7E)—MILLS AND MACHINERY.	1,123	..	..	..	..	..	1,123	..	..
LEAVE & PENSION ALLOWANCE.	..	..	..	84,023	2,029	80,052	84,023	2,029	86,052
TOTAL ..	1,76,63,180	6,04,002	1,81,07,231	6,91,728	16,520	7,08,248	1,82,56,017	6,20,612	1,88,76,619

(a). Includes Rs. 13,482 on account of Sogniorago during the year. Up to date Rs. 2,01,575.

(b). Includes Rs. 67,401 on account of fees for collection of Revenue.

(c). Share of 400 units Establishment excluded under Imperial from 1912-13 to 1917-18.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Western Jumna Canal Project.

No. 3.—REVENUE ACCOUNTS FOR AND TO END OF 1918-19.

Charges	IMPROVEMENT.			CONSTRUCTION.			Total.		
	Rs.	P.	Rs.	Rs.	P.	Rs.	Rs.	P.	Rs.
(5) — TOOLS AND PLANT									
(1) — SCIENTIFIC INSTRUMENTS AND DRAWING MATERIALS	2,791						2,791		
(2) — PLANTS AND MACHINERY	3,743						3,743		
(3) — Tools	3,321						3,321		
(4) — NAVIGATION PLANTS	6,216						6,216		
(5) — Cast Iron Agts.	—202		1,621				—202	2,621	2,419
(6) — Live Stock	171						171		
(7) — OTHER PLANT	25						25		
(10) — MACHINERY	2,63,047			23,630		102	24,632		
(12) — REPAIRS AND CARRIAGE	2,67,917			521			2,68,438		
Total ..	2,67,917		5,62,571	21,121		112	24,632	9,022	5,811,020
(6) — REFUND OF REVENUE	3,72,18	91	2,72,016	..	..	..	3,72,186	918	3,72,018
(7) PROFIT AND LOSS	1,295	..	1,295	..	..	..	1,295	..	1,295
General work in aid of P.G.C.	45,02,523	..	45,02,523	..	..	..	45,02,523	..	45,02,523
Total ..	4,11,82,951	12,57,057	5,61,16,031	17,75,417	61,161	18,63,021	4,20,51,404	13,18,571	4,45,09,561
Indirect charges debitable to Revenue Account as per Account No. 6.	25,61,175	15,29	20,37,147	..	..	..	25,61,175	66,22	20,46,476
TOTAL CHARGES	1,40,14,162	13,12,581	1,33,56,52	18,27,416	61,164	18,60,010	4,68,12,674	14,03,516	4,72,46,157
Balances, Net Revenue	7,62,66,538	15,33,707	7,07,99,510	—17,02,612	—59,012	—15,58,534	7,74,73,101	14,03,701	5,70,46,046
GRAND TOTAL	12,22,79,995	25,70,072	12,61,50,081	33,771	1,282	37,036	12,23,16,704	29,77,551	12,61,93,323

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Western Jumna Canal Project.

No. 4.—INTEREST ACCOUNT FOR AND TO END OF 1918-19.

	Amount.		Amount.
	Rs.	Rs.	Rs.
To Interest charges to end of 1917-18 ..	2,40,45,873	Net Revenue realized to end of 1917-18 ..	7,82,66,533
Do. for the year 1918-19 ..	1,50,01,601	Do. during 1918-19 ..	15,33,707
Total outlay to end of 31st March 1918 ..			
Less half outlay during 1918-19 ..	9,640		
Total ..	1,61,91,958		
Interest at 3-1818 per cent. ..	5,85,144		
Total ..	2,16,36,517		
Balance Revenue after defraying Interest charges ..	6,51,66,023		
Total ..	7,07,00,510	Total ..	7,07,00,510

No. 5.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1918-19.

Particulars.	Previous.	1918-19.	Total.
	Rs.	Rs.	Rs.
CAPITAL—			
Capitalization of abatement of Land Revenue ..	2,10,561	..	2,10,561
Leave and Pension Allowances ..	5,93,621	—135	5,93,621
Imperial ..	5,93,626	—135	5,93,621
Contribution ..	20,010	..	20,010
Total ..	8,03,666	—135	8,03,631
Leave and Pension Allowances debited to Native State, treated as Direct charges and transferred to Account No. 2 of the Canal, ..	20,010	..	20,010
Net debit able to Imperial ..	8,10,217	—135	8,10,082
REVENUE—			
Capitalization of abatement of Land Revenue ..	16,702	725	17,517
Leave and Pension Allowances ..	26,44,386	84,673	29,30,059
Imperial ..	26,44,386	84,673	29,30,059
Contribution ..	84,023	2,020	86,062
Total ..	20,40,101	87,327	30,33,428
DEDUCTION—			
Leave and Pension Allowances debited to Native State, treated as Direct charges and transferred to Account No. 3 of this Canal, ..	84,023	2,020	86,062
Net debit able to Imperial Revenue ..	28,61,178	85,209	29,46,470

IRRIGATION BRANCH.

PUNJAB PROVINCE

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Western Jumna Canal Project.

No. 6.—STATEMENT COMPARING CHARGE TO DATE WITH SANCTIONED ESTIMATE.

PARTICULARS	CHARGE AGAINST CURRENT EXPENSES			PROVED EXPENDITURE			REMARKS
	WORKS	ESTABLISHMENT	GENERAL	WORKS	ESTABLISHMENT	GENERAL	
	ESTABLISHMENT	GENERAL	TOTAL	ESTABLISHMENT	GENERAL	TOTAL	
IMPERIAL	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Digger Charges							
Works	1,92,390,271	2,31,455	1,31,71,150	11	11	11	1,31,71,150
Establishment	25,27,222	1,62,077	20,89,299	11	11	11	20,89,299
Seedbed Plant	1,77,711	10,741	1,88,452	11	11	11	1,88,452
Supervision Balances	—	—	—	2,5,531	—	2,5,531	2,5,531
Total	1,31,94,004	24,24,152	1,31,71,150	2,2,171	—	2,2,171	1,31,71,150
Less Receipts on Capital Account	11,420	—	11,420	—	—	—	11,420
Net Total	1,31,94,004	24,24,152	1,31,71,150	2,2,171	—	2,2,171	1,31,71,150
Digger Projects							
Capitalized interest of Local Revenues	1,5,416	02,41	2,3,827	11	11	11	2,3,827
Leave and Pension Allowances	6,12,601	41,127	6,5,728	11	11	11	6,5,728
Total	6,68,021	1,44,121	7,12,155	11	11	11	7,12,155
GRAND TOTAL	1,31,94,004	24,24,152	1,31,71,150	2,2,171	—	2,2,171	1,31,71,150
CONTRIBUTION							
Digger Charges							
Works	6,31,741	7,42,	6,31,741	11	11	11	6,31,741
Establishment	2,17,461	19,071	2,36,532	11	11	11	2,36,532
Seedbed Plant	20,511	621	21,132	11	11	11	21,132
Total	10,71,663	86,213	11,60,046	11	11	11	11,60,046
Less Receipts on Capital Account	472	—	472	—	—	—	472
Net Total	10,71,663	86,213	11,60,046	11	11	11	11,60,046

IRRIGATION BRANCH,

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Upper Bari Doab Canal Project.

No. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1918-19.

HEADS OF ACCOUNT.	DIRECT CHARGES.			Cost of construction as now estimated (Construction Estimate closed on 31st March 1900).	Expenditure against closed Estimate.		
	Imperial.						
	Previous.	1918-19.	Total.				
I.—WORKS.	Rs.	Rs.	Rs.	Rs.	Rs.		
1. HEAD WORKS—							
B.—Land	..	—261	..	—261			
C.—Works	..	8,23,558	..	8,23,558			
K.—Buildings	..	65,953	..	65,953			
TOTAL	..	8,89,255	..	8,89,255			
2. MAIN CANAL AND BRANCHES—							
A.—Preliminary Expenses	..	8,186	..	8,186			
B.—Land	..	1,41,786	—2,070	1,39,706			
D.—Regulator	..	3,52,030	..	3,52,030			
E.—Falls and Works	..	19,40,484	..	19,40,484			
F.—River and Hill Torrent Works	..	5,39,098	..	5,39,098			
P. (1) —Other Cross Drainage Works	..	1,18,245	..	1,18,245			
G.—Bridges	..	8,52,430	..	8,52,430			
H.—Escapes	..	6,38,733	..	6,38,733			
I.—Navigation Works	..	4,78,588	..	4,78,588			
J.—Mills	..	1,47,530	..	1,47,530			
K.—Buildings	..	10,81,002	10,345	10,91,317			
L.—Earthwork	..	39,00,740	..	39,00,740			
M.—Plantations	..	95,476	..	95,476			
O.—Miscellaneous	..	7,24,457	..	7,24,457			
P.—Maintenance	..	75,872	..	75,872			
TOTAL	..	1,11,07,682	8,266	1,11,15,818			
3.—DISTRIBUTARIES—							
A.—Preliminary Expenses	..	24,333	..	24,333			
B.—Land	..	3,08,015	..	3,08,015			
C.—Works	..	10,20,805	..	10,20,805			
L.—Earthwork	..	16,98,381	..	16,98,381			
O.—Miscellaneous	..	8,10,540	—733	8,15,807			
P.—Maintenance	..	8,354	..	8,351			
Add—Dinanagar Navigation Channel	..	35,776	..	35,776			
Shalpur Water Courses	..	63,427	..	63,427			
Lahore City Rajbaha	..	12,724	..	12,724			
TOTAL	..	41,67,368	—733	41,60,025			
Total carried over	..	1,01,64,105	7,533	1,01,61,728			

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Upper Bati Doab Canal Project.

No. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1918-19—contd.

Head or Account.	DIRECT CHARGES.			Cost of construction and estimated Construction completed up to 31st March 1919 (Rs.)	Expenditure incurred by the year		
	Depend.						
	Previous.	1918-19.	Total.				
I.—WORKS—continued.							
Brought over	..	1,61,74,115	7,132	1,61,81,248			
A.—DAMAGES AND PROPERTY LOSSES.							
A.1.—Premises Occupied	..	500	..	500			
A.2.—Land	..	6,519	..	6,519			
A.3.—Works	..	28,936	..	28,936			
A.4.—Earthwork	..	16,717	..	16,717			
A.5.—Miscellaneous	..	1,103	..	1,103			
TOTAL A.—WORKS	..	45,148	..	45,148			
TOTAL I.—WORKS	..	1,61,81,248	7,132	1,62,88,380	1,62,88,380		
II.—ESTABLISHMENT.							
B.—Direction	..	8,19,275	..	8,19,275			
C.—Executive	..	26,15,004	2,074	26,17,078			
D.—Medical	..	2,415	..	2,415			
TOTAL II.—ESTABLISHMENT	..	36,71,704	2,074	36,73,778	36,73,778		
III.—TOOLS AND PLATE.							
E.—Plant and Machinery	..	15,120	..	15,120			
F.—Navigation Fleet	..	72	..	72			
G.—Repairs and Carparks	..	2,361	140	2,40,501			
H.—Miscellaneous	..	9,16,739	..	9,16,739			
TOTAL III.—TOOLS AND PLATE	..	36,71,704	140	36,71,844	36,71,844		
IV.—SUSPENSE ACCOUNT.							
I.—Stock	..	4,15,455	2,57,791	8,72,246			
II.—Stock Purchases	..	-16,471	10,922	-5,614			
III.—Stock Sales	..	506	-723	82			
IV.—Miscellaneous Advances	..	1,211	1,61,923	1,63,144			
V.—London Stores	..	4,417	-1,401	-11			
TOTAL IV.—SUSPENSE ACCOUNT	..	4,27,377	5,55,872	9,72,241	9,72,241		
GRAND TOTAL	..	5,11,16,984	5,63,111	2,11,75,097	2,08,51,241		
V.—LESS RECEIPTS ON CAPITAL ACCOUNT.							
Net Total	..	16,925	..	16,925	16,925		
VI.—APPORTIONMENT.							
10.—Irrigation Works	..	2,10,63,523	5,63,111	2,10,58,142	2,07,45,566		

IRRIGATION BRANCH.

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PUNJAB PROVINCE

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Upper Bari Doab Canal Project.

No. 3.—REVENUE-ACCOUNT FOR AND TO END OF 1918-19.

RECEIPTS.	IMPERIAL			CHARGES.	IMPERIAL		
	Previous.	1918-19.	Total		Previous.	1918-19.	TOTAL
			Rs.		Rs.	Rs.	Rs.
Occupiers' rates	10,41,49,603	37,52,307	10,70,01,900	(1).—EXTENSIONS AND IMPROVEMENTS.			
Owners' rates on irrigated land.	8,576	..	8,576	1.—HEAD WORKS ..	4,08,835	410	4,08,251
Sales of water	6,04,011	32,481	6,38,500	2.—MAIN CANAL AND BRANCHES ..	14,90,300	26,666	15,16,076
Supply of towns	3,627	60	3,693	3.—DISTRIBUTARIES ..	13,18,217	33,770	13,52,026
Receipts from Plantations.	11,13,603	37,340	11,57,253	4.—DRAINAGE AND PROTECTIVE WORKS.	1,02,352	29,007	2,29,250
Receipts from other Canal produce.	2,46,913	5,103	2,52,136	TOTAL (1) ..	34,00,743	90,768	36,00,511
Water-power	43,25,010	1,23,912	44,48,958	(2).—MAINTENANCE AND REPAIRS.			
Navigation Receipts	6,377	..	6,377	1.—HEAD WORKS ..	48,21,711	45,387	48,57,128
Rent of Buildings	..	8,061	8,061	2.—MAIN CANAL AND BRANCHES ..	93,14,180	2,07,652	96,12,041
Fines	17,61,287	1,605	18,22,232	3.—DISTRIBUTARIES ..	47,23,167	1,33,732	48,02,893
Miscellaneous and other Receipts.	..	4,01,102	4,01,102	4.—DRAINAGE WORKS ..	1,35,180	10,153	1,45,343
Total	11,26,10,310	41,22,310	11,70,38,650	TOTAL (2) ..	1,80,91,657	4,01,324	1,84,87,411
Share of Land Revenue collected in the Civil Department.	1,61,43,060	6,13,621	1,67,56,681	(3).—COMPENSATION.	40,516	..	40,016
Interest on sale proceeds of waste lands banished.	8,00,531	73,661	8,04,101	(4).—ESTABLISHMENT.			
Total	1,70,33,001	6,87,188	1,77,20,789	5.—DIRECTION AND ACCOUNT	23,92,140 (a)		
TOTAL RECEIPTS	12,00,49,011	51,06,534	13,47,59,416	6.—EXECUTIVE ESTABLISHMENT	89,04,331	3,98,202	1,18,83,930
				7.—MEDICAL DO. ..	1,29,257		
				7A.—REVENUE DO. ..	73,31,122 (b)	2,25,111 (b)	75,56,236
				7C.—PLANTATION DO. ..	40,166	15,147	55,302
				7D.—LIAISON AND PENSION 52	52	..	52
				TOTAL ..	1,58,57,057	6,38,103	1,94,95,320
				(5).—TOOLS AND PLANT.			
				1.—SCIENTIFIC INSTRUMENTS AND DRAWING MATERIALS.	1,174		
				2.—PLANT AND MACHINERY ..	8,220		
				3.—TOOLS ..	2,213		
				4.—NAVIGATION PLANT ..	887		
				5.—CAMP EQUIPAGE ..	147		
				6.—LIAISON STOCK ..	1,517		
				7.—OFFICE FURNITURE ..	2,027		
				8.—REPAIRS AND CARRIAGE ..	3,19,932		
				9.—MISCELLANEOUS ..	3,03,058		
				TOTAL (5)—TOOLS AND PLANT.	7,01,421	10,860	7,11,303
				(6).—REFUNDS OF REVENUE.	1,70,351	3,111	1,70,102
				(7).—PROFIT AND LOSS.	1,073	..	1,0,3
				TOTAL ..	4,21,0,801	12,36,0,6	4,21,26,016
				Indirect charges debitable to Revenue Account as per Account No. 5.	28,40,105	89,485	30,35,750
				TOTAL CHARGES ..	4,51,10,216	13,26,420	4,61,05,606
				Balancé, Net Revenue ..	8,47,09,605	37,81,114	8,82,05,719
				GRAND TOTAL ..	12,00,49,011	51,06,534	13,47,59,416

(a). Share of Accounts excluded from 1912-13 to 1917-18.

(b) Incl. cl. Rs. 82,972 on account of fees for collection of revenue.

**OFFICE OF ACCOUNTANT-GENERAL,
ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.
Upper Fari Doab Canal Project.**
No. 4.—INTEREST ACCOUNT FOR AND TO END OF 1918-19.

	Amount.		Amount.
Total Interest charged to end of 1917-18	Rs. 3,19,017.70	Net Revenue realized to end of 1917-18	Rs. 8,15,017.60
Do. for the year 1918-19	..	Do. during 1918-19	Rs. 35,414
Total outlay to end of March 1918-19	Rs. 2,10,68,142		
Less Laff cutback during 1918-19	2,12,057		
Mean Capital charge	2,12,30,053		
Interest at 3½ per cent. on above	7,11,577		
Total	Rs. 3,67,48,030		
Balanc Revenue after defraying Interest charges	Rs. 8,15,14,520		
Total	Rs. 8,15,14,520	Total	Rs. 8,15,14,520

No. 5.—ACCOUNT OF INDIRECT CHARGE FOR AND TO END OF 1918-19.

	Per cent.			Provision	Balanced	Total
	Rs.	Rs.	Rs.			
CAPITAL—						
Capitalization of elements of Land Revenue	..	..	..	Rs. 2,12,057	..	Rs. 2,12,057
Leave and Pension Allowances	..	..	..	7,11,577	..	7,11,577
	Total	..	..	7,11,577	..	7,11,577
REVENUE—						
Capitalized statement of Land Revenue	..	..	..	Rs. 2,12,057	..	Rs. 2,12,057
Leave and Pension Allowances	..	..	..	7,11,577	..	7,11,577
	Total	..	..	7,11,577	..	7,11,577

No. 6.—STATEMENT COMPARING CHARGES TO DATE WITH ANCHORED POSITION.

Particulars.	Charged Accounted up to Date.			Charged Proportion			Total Charged up to date	Balanced up to date	Remarks
	Depreciation on Capital Expenditure	Interest on Capital Expenditure	Total	Per cent. of Date	Amount of Interest Charged	Per cent. of Interest Charged			
Direct Charges—	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Works	1,21,50,701	30,44,773	1,51,95,474	—100.00%	4,617	1,05,00%	1,77,95,161	Rs. 1,77,95,161	1,77,95,161
Establishment	27,81,132	6,52,722	34,33,174	..	963	9.00%	34,33,174	..	34,33,174
Tools and Plant	4,98,815	4,98,815	9,97,630	..	3,750	37.00%	9,97,630	..	9,97,630
Surplus Balances	..	..	..	0.79,510	..	—0.79,510	9,97,630	..	4.2-18, 0.107
Total	1,57,30,130	50,95,308	2,08,25,148	8,78,97%	9,367	5,02,74%	2,17,73,017	..	..
Less Prepaid Capital Account	16,855	..	16,855	..	..	..	16,855	..	..
Net Total	1,57,23,275	50,95,308	2,07,39,143	8,78,97%	9,367	5,02,74%	2,16,86,142	..	..
Indirect Charges—									
Capitalized statement of Land Revenue, Leave and Pension Allowances	8,381	12,286	20,667	..	..	..	20,667	..	..
Total	8,381	12,286	20,667	..	..	..	20,667	..	..
Grand Total	1,65,31,250	51,03,154	2,16,17,301	8,77,053	9,107	5,02,510	2,13,96,762

IRRIGATION BRANCH.

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PUNJAB PROVIN

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Sirhind Canal Project.

No. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1918-19.

HEADS OR ACCOUNT.	DIRECT CHARGES.									Cost of construction as now estimated (Construction Estimate closed on 31st March 1900), Expenditure against closed Estimates.	
	IMPERIAL.			CONTRIBUTION.			TOTAL.				
	Previous.	1918-19.	Total.	Previous.	1918-19.	Total.	Previous.	1918-19.	Total.		
I.—WORKS.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.		
1. HEAD WORKS—											
A.—Preliminary Expenses.	483	..	483	272	..	272	755	..	755		
B.—Land ..	7,053	..	7,053	3,074	..	3,074	11,037	..	11,037		
C.—Work ..	9,10,928	..	9,10,928	5,20,273	..	5,20,273	14,70,201	..	14,70,201		
K.—Buildings ..	77,563	1,048	78,611	43,629	927	41,658	1,21,102	2,675	1,23,767		
O.—Miscellaneous ..	73,804	..	73,804	3,538	..	3,538	77,342	..	77,342		
P.—Maintenance ..	24,101	..	24,101	13,650	..	13,559	37,003	..	37,003		
TOTAL ..	11,23,45	1,615	11,25,603	5,81,216	927	5,05,172	17,18,100	2,575	17,20,765		
2.—MAIN CANAL AND BRANCHES											
A.—Preliminary Expenses.	23,636	..	23,636	10,308	..	10,305	42,934	..	42,934		
B.—Land ..	5,50,860	—53	5,50,827	2,54,332	..	2,54,332	8,14,212	—53	8,14,160		
D.—Regulators ..	4,18,720	..	4,18,720	2,05,027	..	2,05,027	7,13,747	..	7,13,747		
J.—Falls and Weirs ..	7,74,936	..	7,74,936	3,07,900	..	3,07,900	11,72,847	..	11,72,847		
E.—(1).—Other Cross Draining Works.	12,32,587	..	12,32,587	10,41,610	..	10,41,510	22,74,136	..	22,74,136		
G.—Bridges ..	8,16,361	3,161	8,19,522	4,80,072	..	4,80,072	13,00,033	3,161	13,00,160		
H.—Drapers ..	1,86,086	..	1,86,086	1,03,313	..	1,03,313	2,89,000	..	2,89,000		
J.—Navigation Works ..	17,31,197	—6,521	17,25,676	3,81,340	..	3,84,340	21,15,543	—6,521	21,09,022		
J.—Mills ..	41,513	..	41,513	..	..	..	41,513	..	41,513	
E.—Buildings ..	6,60,863	278	6,61,141	3,10,315	..	3,10,315	12,61,208	278	12,61,466		
L.—Earthwork ..	48,70,003	..	48,70,003	31,61,011	..	31,61,014	80,37,707	..	80,37,707		
M.—Plantations ..	1,20,812	..	1,20,812	1,04,358	..	1,04,358	2,25,170	..	2,25,170		
N.—Tanks and Reservoirs.	1,940	..	1,940	..	..	..	1,940	..	1,940	
O.—Miscellaneous ..	87,907	..	87,807	77,387	..	77,387	1,05,284	..	1,05,284		
P.—Maintenance ..	2,27,821	..	2,27,821	2,00,075	..	2,00,075	4,36,800	..	4,36,800		
TOTAL ..	1,20,50,814	—3,135	1,20,37,709	18,4,326	..	18,4,325	1,85,99,100	—3,135	1,88,00,034		
3.—DISTRIBUTORIES—											
A.—Preliminary Expenses.	51,004	..	61,008	30,471	..	30,471	91,379	..	91,379		
B.—Land ..	3,80,686	147	3,86,683	72,001	..	72,001	4,60,137	147	4,60,284		
C.—Works ..	14,08,001	3,170	14,11,127	7,05,007	..	7,05,007	22,03,008	3,170	22,00,184		
L.—Earthwork ..	18,57,046	410	18,58,356	0,77,702	..	0,77,702	20,35,739	410	20,36,146		
O.—Miscellaneous ..	2,55,485	..	2,63,485	17,803	..	17,803	2,73,288	..	2,73,288		
P.—Maintenance ..	..	..	..	..	..	..	..	..	..
TOTAL ..	37,6,876	3,733	37,03,600	10,02,614	..	10,02,674	50,02,556	3,703	50,06,283		
TOTAL, CARRIED OVER ..	1,00,34,086	2,345	1,00,30,911	93,45,291	927	93,43,171	2,62,70,000	3,173	2,62,83,084		

IRRIGATION BRANCH.

OFFICE OF ACCOUNTANT-GENERAL,

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Sirhind Canal Project.

No. 2.—CAPITAL ACCOUNT, FOR AND TO END OF 1918-19—(continued).

HEADS OF ACCOUNTS.	DIRECT CHARGES.										Capital Account Balances Brought forward from previous years, and transferred from other heads of accounts.	
	IMPROVEMENT.			CONSTRUCTION.			TOTAL.					
	1918-19. Rs.	1918-19. Rs.	1918-19. Rs.	1918-19. Rs.	1918-19. Rs.	1918-19. Rs.	1918-19. Rs.	1918-19. Rs.	1918-19. Rs.	1918-19. Rs.		
I.—WORKS—(Contd.)												
Brought over ..	1,73,51,662	9,246,1,63,56,911	11,66,1,63,56,911	5,74,23,0	0,0	53,45,121	2,42,73,0	5,47,1,63,56,911	1,6	0		
(A). DRAINAGE AND PUMPING WORKS												
A.—Purchase Expenses ..	11	0	0	0	0	0	0	0	0	0		
B.—Land ..	0	0	0	0	0	0	0	0	0	0		
C.—Works ..	0	0	0	0	0	0	0	0	0	0		
D.—Earthwork ..	0	0	0	0	0	0	0	0	0	0		
E.—Miscellaneous ..	0	0	0	0	0	0	0	0	0	0		
F.—Maintenance ..	0	0	0	0	0	0	0	0	0	0		
TOTAL I.—WORKS ..	0	0	0	0	0	0	0	0	0	0		
TOTAL II.—ESTABLISHMENT ..	173,51,662	9,246,1,63,56,911	11,66,1,63,56,911	5,74,23,0	0,0	53,45,121	2,42,73,0	5,47,1,63,56,911	1,6	0		
II.—ESTABLISHMENT												
5. Direction (P) ..	0	0	0	0	0	0	0	0	0	0		
6. Executive ..	0	0	0	0	0	0	0	0	0	0		
7. Medical ..	0	0	0	0	0	0	0	0	0	0		
8. SIZZAL SILVER ..	40,50,661	1,67,46,912	21,50,661	11,67,46,912	74,80,572	0,0	74,80,572	0,0	0	0		
9. SPECIAL FIXED REVENUE ..	0	0	0	0	0	0	0	0	0	0		
Leave and Pension Allowances ..	0	0	0	0	0	0	0	0	0	0		
TOTAL II.—ESTABLISHMENT ..	40,50,661	1,67,46,912	21,50,661	11,67,46,912	74,80,572	0,0	74,80,572	0,0	0	0		
III.—TOOLS AND PLANT												
9. NAVIGATION PLANTS ..	0	0	0	0	0	0	0	0	0	0		
10. MILL PLANT ..	0	0	0	0	0	0	0	0	0	0		
11. RAILWAY PLANT AND ROLLING STOCK ..	0	0	0	0	0	0	0	0	0	0		
12. MISCELLANEOUS ..	21,05,620	21,05,620	11,90,557	11,90,557	0	0	0	0	0	0		
13. REPAIRS AND CAR- TAGE ..	0	0	0	0	0	0	0	0	0	0		
Less at Excess ..	0	0	0	0	0	0	0	0	0	0		
TOTAL III.—TOOLS AND PLANT ..	21,05,620	21,05,620	11,90,557	11,90,557	0	0	0	0	0	0		
IV.—SUSPENSE ACCOUNT.												
Stock ..	2,27,601	22,12,2,21,120	0	0	0	0	0	0	0	0		
14. Stock Purchases ..	0	0	0	0	0	0	0	0	0	0		
15. Stock Sales ..	1,957	—964	972	0	0	0	0	0	0	0		
16. Miscellaneous Ad- vances ..	346	2,121	2,057	0	0	0	0	0	0	0		
17. London Invoices ..	0	0	0	0	0	0	0	0	0	0		
18. London Stocks ..	0	0	0	0	0	0	0	0	0	0		
TOTAL IV.—SUSPENSE ACCOUNT ..	2,30,216	24,712	2,21,621	0	0	0	0	0	0	0		
GRAND TOTAL ..	243,26,737	57,406,9,15,84,147	1,43,50,562	1,17,1,43,50,562	1,42,1,43,50,562	1,42,1,43,50,562	1,42,1,43,50,562	1,42,1,43,50,562	1,42,1,43,50,562	1,42,1,43,50,562	1,42,1,43,50,562	
V.—LESS RECEIPTS ON CAPITAL ACCOUNT.	1,47,518	0	1,07,616	69,629	0	0	0	0	0	0		
NET TOTAL ..	2,44,19,210	57,406,9,15,84,147	1,43,51,562	1,17,1,43,51,562	1,42,1,43,51,562	1,42,1,43,51,562	1,42,1,43,51,562	1,42,1,43,51,562	1,42,1,43,51,562	1,42,1,43,51,562	1,42,1,43,51,562	
APPORTIONMENT.												
49.—Irrigation Work ..	2,14,19,210	57,406,9,15,84,147	1,43,51,562	1,17,1,43,51,562	1,42,1,43,51,562	1,42,1,43,51,562	1,42,1,43,51,562	1,42,1,43,51,562	1,42,1,43,51,562	1,42,1,43,51,562	1,42,1,43,51,562	
50.—M.W. AND NAVIGATION ..	0	0	0	0	0	0	0	0	0	0		
IMPERIAL PROVINCIAL												

(a). Share of accounts Establishment excluded from 1913-14 to 1917-18.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Sirhind Canal Project.

No. 3.—REVENUE ACCOUNT FOR AND TO END OF 1918-19.

RECEIPTS.	IMPERIAL.			CONTRIBUTION.			TOTAL		
	Previous.	1918-19	Total.	Previous.	1918-19	Total.	Previous.	1918-19	Total.
Occupiers' rates	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Occupiers' rates	... 7,68,82,460	21,75,310	7,80,57,300	17,02	243	18,040	7,88,60,293	24,78,863	7,83,26,845
Sales of water	... 4,32,740	25,157	4,57,897	18,655	10	18,666	4,51,401	25,107	4,70,758
Supply of towns	... 1,481	1,21	2,701	...	...	...	1,480	1,21	2,701
Receipts from Plantations	... 4,90,691	35,901	5,35,592	2,38,637	10,402	2,53,030	1,36,241	53,303	7,80,034
Receipts from other Canal produce	1,62,058	2,070	1,64,028	1,03,293	...	1,02,295	2,69,251	2,070	2,81,321
Water power	... 20,63,052	1,92,514	21,55,566	9,30,339	57,027	9,57,120	20,93,411	1,89,281	31,82,697
Navigational Receipts	... 2,32,450	11,416	2,43,867	1,10,923	6,47	1,21,768	3,47,704	17,831	5,65,395
Rent of Buildings	... 1,54,730	5,678	1,60,418	51,574	1,706	53,173	1,70,314	7,474	1,83,588
Fines	... 47,271	2,125	49,396	1,10	...	6,8	47,120	2,125	49,396
Miscellaneous and other Receipts	15,04,026	27,102	15,32,019	44,820	2,087	50,017	18,53,780	79,216	19,42,906
Total	... 4,12,51,670	27,71,316	5,39,82,986	15,24,906	84,027	16,02,085	8,27,46,892	58,65,392	8,86,01,874
Share of Land Revenue collected in the Civil Department	3,94,029	68,182	4,62,815	...	...	...	3,94,029	98,466	4,92,515
Interest on sale-proceeds of waste land below 100/-	...	...	...	...	...	...	...	...	...
TOTAL RECEIPTS	... 8,16,15,706	25,00,801	8,44,85,500	15,24,906	84,027	16,02,083	8,31,40,611	29,03,378	8,86,01,499

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Sirhind Canal Project.

No. 3-REVENUE ACCOUNT FOR AND TO END OF 1918-19.

CHARGES	IMPERIAL.			CONTINUATION.			TOTAL.			
	Previous.	E. 1918	Total	Previous	E. 1918-19	Total	Previous.	E. 1918	Total	
(B) EXTENSIONS AND IMPROVEMENTS										
(1) Head Works ..	2,21,376	1,657	2,23,023	1,26,287	1,162	1,25,457	9,35,741	2,917	9,38,658	
(2) Main Canal and Branches ..	10,75,848	14,301	10,89,149	5,68,577	5,174,761	5,174,761	31,24,457	14,856	32,17,323	
(3) Distributaries ..	7,00,263	15,354	7,15,617	14,202	..	14,202	5,10,721	15,354	5,26,073	
(4) Drainage and Protective Works ..	44,361	..	44,361	31,551	..	31,551	6,61,612	..	6,61,612	
Total (1) ..	21,35,680	81,152	22,17,032	22,18,418	22,18,418	22,18,418	43,01,274	1,57,110	45,58,382	
(C) MAINTENANCE AND REPAIRS										
(1) Head Works ..	7,91,153	10,362	7,03,515	4,4,477	6,974	6,974	15,31,521	10,374	15,30,895	
(2) Main Canal and Branches ..	10,70,127	2,41,067	12,11,194	32,784	1,20,027	32,784	74,41,671	3,65,370	78,06,031	
(3) Distributaries ..	47,15,870	1,50,772	48,66,642	277	..	277	47,16,327	1,50,772	48,67,099	
(4) Drainage Works ..	8,23,574	6,484	8,19,058	3,57,351	3,57,351	3,57,351	8,77,612	10,422	8,87,316	
Total (2) ..	1,07,11,213	4,41,250	1,11,53,605	35,45,231	1,53,010	35,45,231	1,43,59,424	8,23,618	1,45,82,642	
(D) COMPENSATION	90,251	17	36,500	18,147	..	18,147	40,791	20	80,528
(E) ESTABLISHMENT										
(1) Direction and Account ..	12,37,743			2,01,921			2,01,921	17,00,684		
(2) Executive Establishment ..	61,50,068	6		10,69,912			10,69,912	71,20,984		
(3) Medical Do. ..	1,50,017	6,68,300	1,20,30,347	82,000	1,07,463	82,00,000	2,49,897	6,60,603	1,78,18,109	
(4) Revenue Do. (B) ..	67,72,450			12,661	12,661		12,661	67,80,146		
(5) Navigation Do. ..	21,246			21,246		
(6) Pay and Pension Allowance (A) per cent on Rs. 1,00,700	3,60,375	16,017	..	3,60,375	..		
Total ..	1,23,01,612	5,6,130	1,23,20,742	27,05,8	1,22,600	27,05,800	1,41,27,090	6,60,604	1,44,18,196	
TOTAL DEDDING OVER ..	2,52,45,000	10,91,257	2,62,36,257	60,12,062	3,23,475	60,12,475	3,37,17,161	14,20,162	3,6,120	

(a) Includes extra charge amounting to Rs. 70,635 during the year.

Incl. Rs. 8,248 on account of fees for collection of Revenue.

Share of account E establishment under Imperial excluded from 1914-15 to 1917-18.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Sirhind Canal Project.

No. 3.—REVENUE ACCOUNT FOR AND TO END OF 1918-19.

CHARGES.	IMPERIAL.			CONTRIBUTION.			TOTAL.		
	Previous.	1918-19.	Total.	Previous	1918-19.	Total	Previous.	1918-19.	Total.
	R.	Rs.	R.	R.	Rs.	Rs.	R.	Rs.	Rs.
Total brought over ..	2,52,47,002	10,81,227	2,63,30,290	45,42,062	3,29,476	35,72,437	37,87,964	14,20,702	3,52,08,726
(5).—TOOLS AND PLANT.									
(1).—SCIENTIFIC INSTRUMENTS AND DRAWING MATERIALS ..	6,82			942			7,760		
(2).—PLANT AND MACHINERY ..	10,177			2,051			12,528		
(3).—Tools ..	11,310			2,701			14,411		
(4).—NAVIGATION ..	7,634			3,231			10,269	...	...
(5).—CAMP EQUIPMENT ..	11,113	9,000	5,27,304	8,873	6,274	2,08,656	23,016	16,343	7,33,860
(6).—LITE STOCK ..	..	..	..	..	..	..	..	..	..
(7).—OFFICE FURNITURE ..	3,014			1,423			4,436		
(8).—REPAIRS AND CARRIAGE ..	1,74,523			68,277			2,12,800		
MISCELLANEOUS ..	2,00,510			1,12,781			4,03,281		
TOTAL ..	5,18,235	0,000	5,27,304	2,00,282	0,274	2,08,656	7,18,517	16,343	7,33,860
(6).—REFUNDS OF REVENUE ..	80,641	2,042	82,669	6,779	80	6,800	87,323	2,118	89,438
(7).—PROFIT AND LOSS ..	372	..	472	87	..	87	467	..	467
(8).—SUSPENSE ACCOUNT ..	..	..	..	..	..	..	..	..	..
MISCELLANEOUS ADVANCES ..	..	..	..	3,040	—292	2,764	3,016	—292	2,754
STOCK ..	..	..	..	17,168	1,272	18,440	17,168	1,272	18,440
STOCK SALES ..	..	..	..	172	—177	..	177	—177	..
STOCK PURCHASE ..	..	..	..	..	..	..	..	..	..
TOTAL SUSPENSE ACCOUNT ..	..	..	..	20,391	803	21,104	20,301	803	21,104
TOTAL ..	2,58,14,153	11,02,441	2,60,40,694	87,70,399	3,10,882	91,07,081	1,40,14,652	14,23,078	3,60,38,030
Indirect Charges debitable to Revenue Accts. as per Account No. 5.	17,35,435	81,512	18,20,347	..	..	..	17,08,835	81,512	18,20,347
TOTAL CHARGES ..	2,75,22,988	11,83,053	2,87,00,911	87,70,490	3,36,582	91,07,081	3,03,63,487	15,20,835	3,78,74,022
BALANCE NET REVENUE ..	5,40,32,717	10,80,843	5,57,18,566	72,45,693	2,62,603	74,09,0	4,7,57,121	14,33,343	4,62,20,167
GRAND TOTAL ..	8,16,18,705	28,00,801	8,41,86,006	16,24,000	64,077	16,08,050	4,31,10,011	10,63,878	8,60,91,481

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Sirhind Canal Project.

No. 4.—INTEREST ACCOUNT FOR AND TO END OF 1918-19.

	Am. 1918-19		Amount.
	Rs.		Rs.
Total Interest charged to end of 1917-18	.. 3,47,8,577	Net Revenue realized to end of 1918-19	.. 5,30,52,517
Do. for the year 1918-19	.. ..	Do. during 1918-19	.. 17,16,648
Rs.			
Total outlay to end of March 1919	2,34,27,625		
Less half outlay during 1918-19	2,34,27,625		
More Capital charges	.. 2,34,3,300		
Interest at 3.491% per cent.	.. .. 9,71,270		
Total	.. 27,41,165		
Balance Revenue after defraying Interest outlay	.. 26,47,370		
Total	.. 6,27,19,625	Total	.. 8,57,3,368

No. 5.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1918-19.

Description.	Previous	1918-19	Total.
	Rs.	Rs.	Rs.
CAPITAL—			
Capitalization of statement of Land Revenue	.. .. .. 3,20,592	.. .. ..	3,20,592
Leave and Pension Allowances	.. Imperial 5,52,072	.. .. .. 5,52,072	5,52,072
Contribution	.. .. .. 2,40,127	.. .. .. 2,40,127	2,40,127
Total	.. 11,12,791	.. .. ..	11,12,791
Do. due Leaves and Pension allowances debited to Native States treated as direct charge and transferred to Account No. 2 of the canal	.. 3,49,151	.. .. .. 3,49,151	3,49,151
Net debitable to Imperial Canal	.. .. .. 12,12,627	.. .. .. 12,12,627	12,12,627
REVENUE—			
Capitalization of statement of Land Revenue	.. .. .. 8,123	.. .. .. 1,090	10,213
Leave and Pension Allowances	.. Imperial 17,70,012	.. .. .. 70,502	18,10,174
Contribution	.. .. .. 3,10,585	.. .. .. 15,015	3,55,433
Total	.. 20,70,220	.. 16,105	21,76,780
Do. due Leaves and Pension allowances debited to Native States treated as direct charge and transferred to Account No. 3 of the canal	.. 3,40,385	.. .. .. 3,40,385	3,40,385
Not Imperial Revenue	.. .. .. 17,79,835	.. 81,612	18,20,347

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Sirhind Canal Project.

No. 6. STATEMENT COMPARING CHARGES TO DATE WITH SANCTIONED ESTIMATE.

PARTICULARS.	CHARGES AGAINST CLOSED SANCTIONS.			CURRENT SANCTIONS.			Total charges to date against old and current sanctions.	REMARKS.		
	Expenditure against Construction Estimate	Expenditure against canal functions.	Total	Charges to date	Amount of Sanctioned Estimate	Unspent Balance of Estimate		Authority	No. & date.	Amount.
IMPERIAL.										
Direct Charges—										
Works ..	1,56,33,67	18,68,022	1,75,02,595	7,620	71,642	64,016	1,75,30,221	Secty. I. B.	062 W.L.	Rs. 8,534
Establishment ..	42,71,851	3,00,093	45,81,949	—1,250	0,331	10,614	46,60,660		18-5-17	
Tools and Plant ..	20,82,851	26,321	21,08,175	210	050	431	21,08,394		0761 WL	5,466
Suspense Balances ..	..	..	2,84,859	..	—2,84,859	2,84,859		G.I.	25-7-17	
Total ..	2,10,85,881	23,01,338	2,42,02,719	2,01,424	81,023	—2,09,801	2,45,84,143	Secty. I. B.	704 WL	3,558
Less Receipts on Capital Account.	1,07,518	..	1,07,518	..	..	..	1,07,518			60,041
Net Total ..	2,18,40,363	23,01,338	2,41,86,200	2,01,424	81,023	—2,09,801	2,44,70,625			8-11-17
INDIRECT CHARGES—										
Capitalized abatement of Land Revenue.	3,15,279	4,820	3,20,000	..	..	..	3,20,000			
Leave and Pension Allowances	8,37,504	64,015	8,02,369	—170	..	179	8,02,130			
Total ..	11,52,073	50,435	12,12,408	—170	..	179	12,12,220			
GRAND TOTAL ..	2,30,33,836	23,03,773	2,53,07,600	2,01,424	81,023	—2,09,622	2,50,88,664			
CONTRIBUTION.										
Direct Charges—										
Works ..	03,60,025	4,48,181	08,17,200	043	..	—943	08,18,149			
Establishment ..	32,66,004	1,01,857	33,68,401	3,477	..	—3,477	33,71,938			
Tools and Plant ..	11,85,900	5,778	12,01,758	—220	..	220	12,01,638			
Suspense Balances ..	..	..	..	..	..	..	..
Total ..	1,38,81,000	5,55,816	1,43,87,42	4,200	..	—4,200	1,43,91,621			
Less Receipts on Capital Account.	08,008	..	68,008	..	..	..	68,008			
Net Total ..	1,37,03,001	5,55,816	1,43,18,817	4,200	..	—4,200	1,43,23,017			
GRAND TOTAL ..	3,67,06,837	20,10,580	3,97,10,426	2,06,445	81,023	—2,13,622	4,00,11,871			

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Lower Chenab Canal Project

No. 2 - CAPITAL ACCOUNT FOR AND TO END OF 1918-19.

HEADS OF ACCOUNT.	DRAFT CHARGE.			Cost of one quarter's work at Head- Construction Estimate as on 31st March 1919.	Expenditure against Head Estimate.		
	Proposed		Total				
	Previous.	1918-19.					
I - WORKS.							
1. - HEAD WORKS -							
A. - Preliminary Expenses	5,410	..	5,410		
B. - Land	64,105	..	64,105		
C. - Works	54,70,213	271	54,77,484		
D. - Rail-hoops	17,001	..	17,001		
E. - Miscellaneous	7,013	..	7,013		
F. - Maintenance	3,6374	..	3,6374		
	TOTAL	..	54,18,707	271	54,19,978		
2. - MAIN CANAL AND BRANCHES -							
A. - Preliminary expenses	1,27,304	..	1,27,304		
B. - Land	1,03,512	-3,435	1,00,077		
C. - Regulators	11,10,850	..	11,10,850		
E. - Falls and Weirs	6,15,244	..	6,15,244		
F. (1) - Old or Cross Drainage Works	6,97,002	..	6,97,002		
G. - Bridges	10,73,577	..	10,73,577		
H. - Escarpments	3,10,312	..	3,10,312		
J. - Mills	73,074	..	73,074		
K. - Buildings	17,10,634	6,632	17,17,266		
L. - Earthwork	23,12,070	5,974	23,17,044		
M. - Plantations	1,32,731	..	1,32,731		
O. - Miscellaneous	3,97,577	..	3,97,577		
P. - Maintenance	1,05,647	..	1,05,647		
	TOTAL	..	1,42,71,863	4,675	1,43,26,538		
3 - DRAINAGE -							
A. - Preliminary Expenses	1,38,476	..	1,38,476		
B. - Land	1,20,784	..	1,20,784		
C. - Works	16,61,212	..	16,61,212		
Z. - Pathwork	27,25,846	..	27,25,846		
O. - Miscellaneous	6,04,727	1,231	6,06,958		
P. - Maintenance	24,570	..	24,570		
	TOTAL	..	54,18,004	1,231	54,20,235		

IRRIGATION BRANCH. PUNJAB PROVINCE.
OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Lower Chenab Canal Project.

No. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1918-19.

HEADS OF ACCOUNT.	DIRECT CHARGES.			Cost of construction now estimated (Construction Estimate closed on 31st March 1900).	Expenditure against closed Estimates.		
	Imperial.						
	Previous.	1918-19.	Total.				
4.—DRAINAGE AND PROTECTIVE WORKS—							
A.—Preliminary Expenses	..	..	19,771	19,771	
B.—Land	..	..	24,002	24,002	
C.—Works	..	..	47,446	47,446	
L.—Earthwork	..	..	1,78,736	1,78,736	
O.—Miscellaneous	..	..	37,550	37,550	
P.—Maintenance	..	..	1,162	1,162	
	TOTAL	..	3,09,267	3,09,267			
	TOTAL L.—WORKS	..	2,58,66,602	6,577	2,58,72,179		
II. ESTABLISHMENT.							
5. DIRECTION	..	..	(a) 12,46,328		
6. EXECUTIVE	..	..	35,27,201	1,708	(a) 48,37,409
7. MEDICAL	..	..	62,178		
8. SPECIAL SURVEY	..	..	..	
8½. SPECIAL FIELD SURVEY	..	..	..	
LEAVE AND PENSION ALLOWANCES	..	..	..	
	TOTAL	..	48,35,761	1,708	48,37,469		
III. TOOLS AND PLANT.							
9. NAVIGATION PLANT	..	..	..	..
10. MILL PLANT	..	..	..	..
11. RAILWAY PLANT AND ROLLING STOCK	..	..	15,000	..	15,000
12. MISCELLANEOUS	..	..	8,23,737	57	8,23,794
13. REPAIRS AND CARRIAGE	..	..	1,02,328	..	1,02,328
LOSS BY EXCHANGE	..	..	..	..
	TOTAL	..	8,41,065	57	8,41,122		
	TOTAL	..	8,41,122	7,17,310	8,41,122		
IV. SUSPENSE ACCOUNT.							
14. STOCK	..	..	3,97,400	—22,595	3,74,811
15. " PURCHASES	..	..	—2,078	—13,908	—10,670
15. (a) " SALRS	..	..	718	8,782	6,507
16. MISCELLANEOUS ADVANCES	..	..	16,123	868	16,001
17. LONDON INVOICES	..	..	..	
18. " STORES	..	..	..	
	TOTAL	..	4,10,600	—29,930	2,80,633		
	GRAND TOTAL	..	3,17,61,997	—22,594	3,17,31,405		
V.—LESS RECEIPTS ON CAPITAL ACCOUNT.							
	NET TOTAL	..	14,558	..	14,558		
	APPORTIONMENT.						
49.—IRRIGATION WORKS	..	..	3,17,25,029	—22,594	3,17,02,435
48.—M. W. AND NAVIGATION, IMPERIAL	..	..	14,410	..	14,410

(a). Excludes Balance of Accounts Establishment commencing from 1912-13 to 1917-18.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Lower Chaus Canal Project

No. 3. REVENUE ACCOUNT FOR AND TO END OF 1918-19.

RECEIPTS.	INCOME			CHARGES	EXPENSE		
	Previous.	1918-19.	Total		Previous.	1918-19.	Total
Occupancy rates	Rs. 14,00,28,250	Rs. 31,110	Rs. 14,31,390	(1) EXTENSIONS AND IMPROVEMENTS	Rs. 17,70,500	Rs. 10,200	Rs. 17,80,700
				1.—HEAD WORKS	... 15,70,500	... 10,200	15,80,700
				2.—MAIN CANAL AND支渠	15,31,000	6,000	15,37,000
				3.—DISTRIBUTORIES	10,20,500	5,000	10,25,500
				4.—BRIDGES, AND PROTECTIVE WORKS	1,91,500	6,000	1,97,500
				Total (1)	40,22,500	11,200	41,33,700
Bal. of water	Rs. 1,18,510	Rs. 630	Rs. 1,19,140	(2)—MANAGEMENT AND PAYMENT			
				1.—HEAD WORKS	Rs. 21,200	1,000	Rs. 21,200
				2.—MAIN CANAL AND BRANCH CANALS	94,30,100	4,000	94,34,100
				3.—DISTRIBUTORIES	10,12,000	2,000	10,14,000
				4.—BRIDGES & PROTECTIVE WORKS	1,55,100	3,000	1,58,100
				Total (2)	127,03,300	7,000	127,10,300
Supply of towns	Rs. 23,175	Rs. 200	Rs. 23,195	(3)—COMMISSIONS ON			
				4.—EXTENSION AND IMPROVEMENT			
				1.—HEAD WORKS	... 15,50,100	... 5,000	15,55,100
				2.—MAIN CANAL AND BRANCH CANALS	94,30,100	4,000	94,34,100
				3.—DISTRIBUTORIES	10,12,000	2,000	10,14,000
				4.—BRIDGES & PROTECTIVE WORKS	1,55,100	3,000	1,58,100
				Total (3)	127,03,300	7,000	127,10,300
Benefits from Irrigation	Rs. 1,06,610	Rs. 470	Rs. 1,06,650	(4)—COMMISSIONS ON			
				4.—EXTENSION AND IMPROVEMENT			
				1.—HEAD WORKS	... 15,50,100	... 5,000	15,55,100
				2.—MAIN CANAL AND BRANCH CANALS	94,30,100	4,000	94,34,100
				3.—DISTRIBUTORIES	10,12,000	2,000	10,14,000
				4.—BRIDGES & PROTECTIVE WORKS	1,55,100	3,000	1,58,100
				Total (4)	127,03,300	7,000	127,10,300
Benefits from other Canal projects	Rs. 220	Rs. 100	Rs. 320	(5)—COMMISSIONS ON			
				4.—EXTENSION AND IMPROVEMENT			
				1.—HEAD WORKS	... 15,50,100	... 5,000	15,55,100
				2.—MAIN CANAL AND BRANCH CANALS	94,30,100	4,000	94,34,100
				3.—DISTRIBUTORIES	10,12,000	2,000	10,14,000
				4.—BRIDGES & PROTECTIVE WORKS	1,55,100	3,000	1,58,100
				Total (5)	127,03,300	7,000	127,10,300
Water-power	Rs. 16,760	Rs. 200	Rs. 16,780	(6)—DISBURSEMENTS			
				1.—Disbursements for Irrigation	Rs. 15,170	Rs. 1,000	Rs. 15,270
				2.—Disbursements for Irrigation Management	75,20,000	5,000	75,25,000
				3.—Disbursements for Irrigation	1,000	0	1,000
				4.—A. Disbursements for Irrigation	61,00,000	4,000	61,04,000
				5.—B. Disbursements for Irrigation	145,71,400	11,000	145,72,500
Navigation	Rs. 20	Rs. 100	Rs. 210	Total (6)	145,71,400	11,000	145,72,500
Rent of Buildings	Rs. 2,37,771	Rs. 370	Rs. 2,38,141	(7)—TOLLS AND PLANT			
				1.—Tolls and Plant			
				2.—Services rendered by Irrigation Department	3,075		3,075
				3.—Fees and Charges	26,750		26,750
				4.—Fees and Charges	15,610		15,610
				5.—To 10	1,000		1,000
				6.—Maintenance of Irrigation	1,000		1,000
				7.—Land Revenue	1,710		1,710
				8.—Office Supplies	2,710		2,710
				9.—Miscellaneous	66,100		66,100
				10.—Repairs and Maintenance	2,750		2,750
				11.—Petrol	5,100		5,100
				12.—Railway Journey and Portage	44,675		44,675
				13.—Other Services			
				Total (7)	145,71,400	11,000	145,72,500
Shares of Land Revenue collected in the Civil Department	Rs. 19,80,100	Rs. 67,650	Rs. 19,86,750	(8)—REFUND OF REVENUE			
				1.—Refund of Revenue	Rs. 1,18,610	Rs. 1	Rs. 1,18,610
				Total (8)	1,18,610	Rs. 1	Rs. 1,18,610
Total on sale proceeds of waste lands harvested	Rs. 33,00,000	Rs. 32,500	Rs. 33,00,500	Indirect charges debitable to Revenue Account under Account No. 5.			
				1.—Total Charges	Rs. 10,00,500	Rs. 1,00,000	Rs. 10,10,500
				2.—Balances Net Revenue	Rs. 10,00,000	Rs. 1,00,000	Rs. 10,10,000
				GRAND TOTAL	Rs. 0,93,00,000	Rs. 1,00,000	Rs. 0,93,10,000
TOTAL RECEIPTS	Rs. 10,73,65,760	Rs. 1,66,28,860	Rs. 10,75,33,620				

(a). Reconciliation of Accounts established commencing from 1917-18 to 1917-18.

(b). Includes Rs. 2,710/- recovered of Lambardar's fees for collection of Revenue.

IRRIGATION BRANCH.

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OFFICE OF ACCOUNTANT-GENERAL.
ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.
Lower Chenab Canal Project.
No. 4.—INTEREST ACCOUNT FOR AND TO END OF 1918-19.

	Amount.		Amount.
	Rs.		Rs.
Total Interest charges to end of 1917-18 ..	2,48,00,142	Net Revenue realized to end of 1917-18 Dc. during 1918-19 ..	10,36,48,325
Do. for the year 1918-19 ..	..		1,42,48,271
Total outlay to end of 31-3 1919—Rs. 3,17,10,646			...
Less half the outlay during 1918-19 ..	11,297		
Mean Capital charge ..	3,17,28,142		
Interest at 5 4818 per cent. ..	11,04,710		
Total ..	2,56,10,852		
Balance Revenue after defraying interest charges... ..	15,19,80,744		
Total ..	17,76,87,606	Total ..	17,78,97,496

No. 5.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1918-19.

	PARTICULARS.	PROVISIONS.	1918-19.	Total.
		Rs.	Rs.	Rs.
CAPITAL—				
Capitalization of abatement of Land Revenue	1,02,344
Leave and Pension Allowances	230	6,77,127
		Total	230	7,78,371
REVENUE—				
Capitalization of abatement of Land Revenue	3,375	4,025
Leave and Pension Allowances	1,61,069	27,61,674
		Total	1,61,069	27,65,000

No. 6.—STATEMENT COMPARING CHARGES TO DATE WITH SANCTIONED ESTIMATE.

PARTicularS.	CHARGES AS-ON 1st FEBRUARY SANCTIONED.			CURRENT SANCTIONS.			Total charges to date against old and current sanctions.	REMARKS.
	Expenditure against outlay on Estimate.	Expendi- ture against open canal sanction.	Total.	Charges to date.	Amount of Sanctioned Estimate.	Unspent Balance of Estimate		
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.		
IMMEDIATE CHARGES—								
Works ...	1,90,23,002	55,34,371	2,55,57,373	4,16,806	7,37,148	3,82,542	2,68,72,179	G. I. $\frac{520}{8-4-13} = 1,75,752$
Establishment ..	38,40,006	11,97,403	48,37,409	..	1,10,453	1,16,453	48,37,460	" $\frac{624}{16-3-14} = 1,72,701$
Tools and Plant ..	5,02,825	48,207	5,41,122	..	70,188	70,188	6,41,122	" $\frac{609}{6-4-14} = 2,25,338$
Suspense Balances ..	..	..	..	2,80,633	..	-3,80,633	3,80,633	" $\frac{551}{25-5-14} = 1,48,007$
								" $\frac{551}{16-1-10} = 90,164$
Total ..	2,41,56,093	67,80,071	3,09,36,164	7,95,233	0,20,789	1,34,550	2,17,31,403	L. G. $\frac{01378}{18-8-15} = 11,105$
LOSS RECEIVED ON CAPITAL ACCOUNT	14,403	155	14,558	..	..	14,558		" $\frac{3277}{3-12-17} = 3,380$
Net Total ..	2,41,41,690	67,79,916	3,09,21,000	7,95,233	0,20,789	1,34,550	2,17,16,816	" $\frac{3281}{8-12-17} = 17,076$
INDIRECT CHARGES—								" $\frac{3263}{8-12-17} = 22,471$
Capitalized abatement of Land Revenue ..	92,050	10,185	1,02,214	..	..	..	1,02,214	" $\frac{3283}{8-12-17} = 17,810$
Leave and Pension Allowances ..	6,09,400	1,67,637	6,77,127	..	..	..	6,77,127	" $\frac{3102}{8-12-17} = 12,214$
Total ..	6,01,540	1,77,822	7,79,371	..	..	..	7,79,371	" $\frac{3102}{8-12-17} = 13,514$
TOTAL	17,40,230	60,57,738	347,60,977	7,95,233	0,20,789	1,34,550	3,21,40,910	0,29,769

OFFICE OF ACCOUNTANT GENERAL,
ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Upper Sutlej Inundation Canals Project.

No. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1918-19.

HEADS OR ACCOUNTS.	DIRECT CHARGES			Cost of construction as now estimated (Construction L. complete closed on 31st March 1918.)	Expenditure against closed Estimate.		
	IMPERIAL.						
	Previous.	1918-19.	Total.				
I.—WORKS.							
A.—Main CANAL AND BRANCHES—							
<i>A.—Preliminary Expenses</i>	8,649	..	8,649		
<i>B.—Land</i>	43,648	..	43,648		
<i>C.—Regulators</i>	30,612	..	30,612		
<i>D.—Falls and Weirs</i>	65,015	..	65,015		
<i>E.—Bridges</i>	22,492	..	22,492		
<i>F.—Buildings</i>	5,20,583	..	5,20,583		
<i>G.—Earthwork</i>	6,82,638	..	6,82,638		
<i>H.—Miscellaneous</i>	5,112	..	5,112		
<i>I.—Maintenance</i>	2,407	..	2,407		
TOTAL I.—WORKS	..	8,70,723	..	8,70,723	..		
II.—DISPENSATION—							
<i>A.—Preliminary Expenses</i>	1,112	..	1,112		
<i>B.—Land</i>	42,742	..	42,742		
<i>C.—Works</i>	12,025	..	12,025		
<i>D.—Earthwork</i>	3,21,314	..	3,21,314		
<i>E.—Miscellaneous</i>	22,641	..	22,641		
<i>F.—Maintenance</i>	4,637	..	4,637		
TOTAL II.—DISPENSATION	..	3,09,619	..	3,09,619	..		
TOTAL I + II.—ESTABLISHMENT.	..	11,79,342	..	11,79,342	11,79,342		
III.—TOOLS AND PLANT.							
A.—DIRECTION (a)	51,000	..	51,000		
B.—EXECUTIVE	9,37,176	..	9,37,176		
C.—MEDICAL	2,673	..	2,673		
TOTAL III.—TOOLS AND PLANT.	..	53,04,849	..	53,04,849	53,04,849		
IV.—SUSPENSE ACCOUNT.							
14.—STOCK	20,107	—6,027	14,080		
14(a).—Stock Purchases	—1	—10	—11		
15.—STOCK SALES	67	—83	14		
16.—MISCELLANEOUS ADVANCES	48	327	655		
TOTAL IV.—SUSPENSE ACCOUNT.	..	30,304	—6,027	14,077	..		
GRAND TOTAL.	..	17,10,438	—6,027	17,11,411	16,96,134		
V.—LESS RECEIPTS ON CAPITAL ACCOUNT.							
NET TOTAL	..	17,10,437	—6,027	17,11,410	16,95,978		
VI.—APPOINTMENT.							
49.—IRRIGATION WORKS	9,26,373	—5,027	9,21,346		
43.—M. W. AND NAVIGATION—PROVINCIAL	7,59,937	..	7,59,937		

(a). Share of Accounts Establishment excluded from 1912-13 to 1917-18.

IRRIGATION BRANCH.

PUNJAB PROVINCE

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Upper Sutlej Inundation Canals Project.

No. 3.—REVENUE ACCOUNTS FOR AND TO END OF 1918-19.

RECEIPTS.	IMPERIAL.			CHARGES.	IMPERIAL.		
	Previous.	1918-19.	Total.		Previous.	1918-19.	Total.
Occupiers' rates ..	Rs. 62,77,672	Rs. 6,41,917	Rs. 68,19,610	(1).—EXTENSIONS AND IMPROVEMENTS, (2).—MAIN CANAL AND BRANCHES, (3).—DISTRIBUTARIES .. (4).—DRAINAGE AND PROTECTIVE WORKS,	Rs. 4,32,073	Rs. 4,071	Rs. 4,37,144
Owners' rates on irrigated land ..	17,732	..	17,732		1,88,420	6,676	1,04,101
Sale of water ..	8,177	82	8,259	TOTAL (1) ..	1,158	..	1,158
Receipts from Plantations ..	1,33,167	2,223	1,35,390	(2).—MAINTENANCE AND REPAIRS. (1).—HEAD WORKS ..	6,22,357	10,440	6,32,903
Receipts from other Canal Produce ..	70,519	617	70,630	(2).—MAIN CANAL AND BRANCHES, (3).—DISTRIBUTARIES ..	10,370	..	10,370
Rent of Buildings ..	8,272	1,000	9,502	TOTAL (2) ..	51,48,073	1,48,080	52,93,103
Fines ..	2,25,486	206	2,25,691	(3).—COMPENSATION ..	9,58,577	18,003	9,77,180
Minor Dues and other Receipts ..	30,630	6,472	46,100	(4).—ESTABLISHMENT, (5).—DIRECTION AND ACCOUNT, (6).—EXECUTIVE ESTABLISHMENT, (7).—MEDICAL ESTABLISHMENT, 7 (A).—REVENUE ESTABLISHMENT,	16,17,020	1,73,633	16,80,652
Contribution ..	22,830	..	22,830	TOTAL ..	8,695	..	8,695
Total ..	Rs. 98,04,466	Rs. 5,52,936	Rs. 1,03,57,402	(6).—TOOLS & PLANT, (1).—SCIENTIFIC INSTRUMENTS, (2).—PLANTS AND MACHINERY, (3).—TOOTS ..	10,20,758	..	10,20,758
Share of Land Revenue collected in the Civil Department ..	70,50,807	2,77,052	72,27,850	(4).—NAVIGATION PLANT, (5).—CAMP EQUIPMENT ..	23,80,371	1,18,016	24,42,181
Interest on sale-proceeds of waste lands benefited ..	96,527	11,008	1,08,525	(6).—LIVE STOCK ..	42,130	..	42,130
Total ..	Rs. 80,46,334	Rs. 2,88,150	Rs. 83,34,484	(7).—OFFICE FURNITURE ..	14,35,550	63,058	14,98,017
TOTAL RECEIPTS ..	Rs. 1,78,50,800	Rs. 8,41,086	Rs. 1,86,91,886	(8).—REFUNDS OF REVENUE, 7.—PROFIT AND LOSS ..	46,54,624	1,81,974	47,10,798
				TOTAL ..	77,301	3,346	80,607
				(6).—REFUNDS OF REVENUE ..	26,806	177	26,983
				7.—PROFIT AND LOSS ..	370	..	370
				TOTAL ..	1,14,10,361	3,50,076	1,17,70,027
				Indirect Charges debitable to Revenue Account as per Account No. 8 ..	7,00,175	10,898	7,16,073
				TOTAL CHARGES ..	1,21,19,626	3,70,674	1,24,00,100
				Balance, Net Revenue ..	57,31,274	4,64,512	61,95,786
				GRAND TOTAL ..	1,78,50,800	8,41,086	1,86,91,886

(a) Share of Accounts Establishment excluded from 1912-13 to 1917-18.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Upper Sutlej Inundation Canals Project.

No. 4.—INTEREST ACCOUNT FOR AND TO END OF 1918-19.

	Amount.		Amount.
	Rs.		Rs.
Total Interest charges to end of 1917-18 ..	22,42,818	Net Revenue realized to end of 1917-18 ..	27,71,574
Do. for the year 1918-19 ..	..	during 1918-19 ..	6,74,712
Total outlay to 31st March 1918 ..	17,11,770		
Less half outlay during 1918-19 ..	-2,714		
Mean Capital of charge ..	17,13,770		
Interest at Rs. 3 1/4% per cent. ..	22,42,818		
Total interest charges ..	22,42,818		
Balance Revenue after defraying interest charges ..	24,58,514		
Total ..	21,91,770	Total ..	21,55,267

No. 5.—ACCOUNT OF INFLATION CHARGES FOR AND TO END OF 1918-19.

PARTICULARS	Previous.	1918-19	Total.
CAPITAL—			
Capitalization of statement of Land Revenue Leave and Pension Allowances ..	Rs. 25,653 43,75	..	Rs. 69,23 47,75
Total ..	1,01,011	..	1,01,011
REVENUE—			
Capitalization of statement of Land Revenue Leave and Pension Allowances ..	13,472 7,3,702	17,712	17,712 7,3,702
Total ..	7,04,174	17,712	7,21,886

No. 6.—STATEMENT COMPARING CHARGES TO DATE WITH FRACTIONED ESTIMATE.

PARTICULARS.	CHARGES AS OF 31ST MARCH 1918.			Current Position.			Total charges to date under fractioned estimate.	REMARKS.
	Estimated Infla- tion Charges, less Estimate,	Expendi- ture as at 31 March per cent. fractioned)	Total	Amount charged to date	Amount of frac- tioned estimate	Balanc- e in accord- ance with frac- tioned estimate		
DIRECT CHARGES—								
Works ..	10,07,761	3,05,174	13,12,935	..	..	..	13,12,935	
Establishment ..	2,24,563	70,162	2,94,725	..	..	..	2,95,512	
Tools and Plant ..	20,018	4,216	24,234	..	..	..	24,647	
Suspense Balance ..	..	..	..	18,277	..	-18,277	18,317	
Total ..	12,52,342	4,43,540	16,95,882	18,277	..	-18,277	17,51,811	
Less Receipts on Capital Account ..	186	..	186	..	..	..	186	
Net Total ..	12,52,156	4,43,540	16,95,706	18,277	..	-18,277	17,51,625	
INCORRECT CHARGES—								
Capitalized statement of Land Revenue Leave and Pension Allowances ..	63,651	4,352	68,003	..	..	..	68,003	
Total ..	67,672	14,512	1,01,041	..	..	..	1,01,041	
GRAND TOTAL ..	13,03,271	4,77,738	17,07,019	18,277	..	-18,277	18,12,392	

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Sidhnai Canal Project.

No. 2—CAPITAL ACCOUNT FOR AND TO END OF 1918-19.

HEAD OF ACCOUNT.	DIRECT CHARGES.			Cost of construction as now estimated (Construction Estimate closed on 31st March 1902.)	Expenditure against closed Estimates.		
	Interval.						
	Previous.	1918-19.	Total.				
I.—WORKS.							
1. HEAD WORKS—							
A.—Preliminary Expenses ..	..	764	..	764		
B.—Land ..	..	235	..	235		
C.—Works ..	..	3,46,260	..	3,46,260		
K.—Buildings ..	..	11,646	..	11,646		
O.—Miscellaneous ..	..		..	391	
	Total ..	2,50,236	..	2,50,236			
2. MAIN CANAL AND BRANCHES—							
A.—Preliminary Expenses ..	..	4,014	..	4,014		
B.—Land ..	..	22,422	..	22,422		
D.—Regulators ..	..	49,868	..	49,868		
G.—Bridges ..	..	44,080	..	44,080		
K.—Buildings ..	..	60,780	..	60,780		
L.—Earthwork ..	..	2,58,906	..	2,58,906		
M.—Plantations ..	..	621	..	621		
O.—Miscellaneous ..	..	427	..	427		
P.—Maintenance ..	..	5,394	..	5,394		
	Total ..	4,07,411	..	4,07,411			
DISTRIBUTURES—							
A.—Preliminary Expenses ..	..	8,905	..	8,905		
B.—Land ..	..	11,387	..	11,387		
C.—Works ..	..	66,622	..	66,622		
L.—Earthwork ..	..	1,30,786	..	1,30,786		
O.—Miscellaneous ..	..	105	..	105		
	Total ..	2,18,028	..	2,18,028			

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Sidhwan Canal Project.

No. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1918-19

HEAD OF ACCOUNT	DIRECT CHARGES			Cost of construction as now estimated (Contract Estimate less than Net Excess 1918-19)	Expenditure against closed Estimate		
	Interest						
	Previous	1918-19	Total				
	Rs.	Rs.	Rs.	Rs.	Rs.		
IV. DRAINAGE AND PROTECTIVE WORKS—							
<i>A.—Preliminary Expenses</i>	..	56	..	26			
Total	..	56	..	26			
TOTAL I.—WORKS	..	6,38,732	..	2,42,732	2,42,732		
V.—ESTABLISHMENT.							
6. Direction	..	..	..	(2) 26,512	26,512
7. Directors	..	..	..	2,14,721	2,14,721
7. Medical	..	..	..	
Total	..	2,14,721	..	2,42,732	2,42,732		
VI.—TOOLS AND PLANT.							
12. Miscellaneous	..	..	..	1,847	1,847
13. Library and Carpets	..	..	..	
Total	..	1,847	..	1,847	1,847		
IV.—OPENING ACCOUNT.							
14. Stock Purchases	..	..	..	-111	-111
15. Stock Sales	..	..	..	111	111
16. Merchandise Advances	..	..	..	(12)	-12
17. Stock	..	..	..	11,361	11,361
Total	..	11,361	..	11,361	11,361		
GRAND TOTAL	..	10,48,526	..	10,48,526	10,48,526		
V.—LESS RECEIPTS ON CAPITAL ACCOUNT.							
	Rs.	..	Rs.	Rs.	Rs.		
Net Total	..	12,00,000	..	12,00,000	12,00,000		
VI.—APPOINTMENT.							
49.—IRRIGATION Works	..	..	..	12,73,000	12,73,000
Total	..	12,73,000	..	12,73,000	12,73,000		
70.—M. W. AND NAVIGATION—PROVINCIAL							

IRRIGATION BRANCH,

PUNJAB PROVINCE

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Sidhuani Canal Project.

No. 3.—REVENUE ACCOUNT FOR AND TO END OF 1918-19.

RECEIPTS.	IMPERIAL			CHARGES.	IMPERIAL		
	Previous.	1918-19	Total.		Previous.	1918-19	Total.
Occupiers' rates ..	Rs. 1,00,26,039	Rs. 6,06,034	Rs. 1,06,31,073	1.—EXTENSIONS AND IMPROVEMENTS. 1.—HEAD WORKS .. 2.—MAIN CANAL AND BRANCHES .. 3.—DISTRIBUTARIES .. 4.—DRAINAGE AND PROTECTIVE WORKS.	Rs. 32,267	Rs. 1,681	Rs. 33,848
Owners' rates ..	..	46	46		1,77,991	1,720	1,79,770
Sale of water ..	45,061	314	45,395		86,117	5,473	91,590
Receipts from Plantations ..	6,836	1,626	8,161	TOTAL 1. ..	8,833		3,07,716
Receipts from other Canal produce ..	9,512	250	9,762	2.—MAINTENANCE AND REPAIRS. 1.—HEAD WORKS .. 2.—MAIN CANAL AND BRANCHES .. 3.—DISTRIBUTARIES ..	3,51,620	7,947	2,52,667
Rent of Buildings ..	19,170	265	19,435	TOTAL 2. ..	20,233		9,82,620
Fines ..	8,421	441	8,862	3.—COMPENSATION. ..	5,42,487	12,265	5,64,712
Miscellaneous and other Receipts ..	16,311	1,556	17,867	4.—ESTABLISHMENT. 5.—General Establishment including Direction and Account.	18,56,470	40,435	18,9,903
Share of land Revenue collected in the Civil Department ..	18,65,127	1,78,471	20,43,698	6.—REVENUE ESTABLISHMENT.	231	..	231
Interest on sale-proceeds on waste lands benefited ..	3,03,613	23,022	3,87,635	TOTAL ..	20,473		
Total ..	1,01,31,073	6,00,556	1,07,40,633	5.—TOOLS AND PLANT. 1.—SCIENTIFIC INSTRUMENTS AND DRAWING MATERIALS .. 2.—PLANT AND MACHINERY ..	(a) 1,56,944	26,147	10,05,335
				3.—TOOLS ..	8,83,771		
				4.—NAVIGATION PLANT ..	20,473		
				5.—CAMP EQUIPAGE ..	0,72,742	(a) 14,232	6,80,574
				6.—LIVED STOCK ..	17,11,030	40,373	17,52,300
				7.—OFFICE FURNITURE ..			
				8.—REPAIRS AND CARRIAGE ..			
				9.—MISCELLANEOUS ..			
				TOTAL ..	50,598	488	60,086
					2,305	26	2,330
					30,27,117	80,160	40,17,777
					2,29,956	5,053	2,15,608
					41,67,372	96,613	42,68,183
					81,92,446	7,16,125	80,08,521
					1,23,60,818	8,11,048	1,31,71,760
					GRAND TOTAL ..		

(a). Includes Rs. 1,014 on account of fees for collection of Revenue.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Sutlej Canal Project

No. 4.-INTEREST ACCOUNT FOR AND TO END OF 1918-19.

	Amount Rs.	Amount Rs.	
Total Interest at start of 1917-18 Deducted for the year 1918-19	13,72,44	Net Revenue reduced to end of 1917-18 during 1918-19	11,22,46
Total due up to 31st March 1918 to 30th October during 1918-19	12,50,719	7,15,45	
Rate of Capital at charge Interest at 2% per cent	12,61,525		
	44,988		
Total	14,06,512		
Balance Revenue after defraying interest charge	13,90,729		
Total	13,90,729	Total	13,90,729

No. 5.-ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1918-19.

Particulars	Per cent				Date
	1917-18	1918-19	1917-18	1918-19	
CAPITAL—					
Capitalization of statement of Land Revenue	2,274
Leave and Pension Allowance	3,697
					3,697
Total	47,218	..	47,218
REVENUE—					
Capitalization of statement of Land Revenue	2,64
Leave and Pension Allowance	2,64
					2,64
Total	5,288	..	5,288
Grand Total	52,492	..	52,492

No. 6.—STATEMENT OF COMPARING CHARGES TO DATE WITH SANCTIONED ESTIMATE.

Particulars	SANCTIONED CHARGE BASED ON			CHARGE RECEIVED		TOTAL CHARGE TO DATE ACCURATE AND CURRENT BALANCE	REMARKS
	Expenditure Excluding amount spent against 1917-18 excess estimate allowances	Expenditure Excluding amount spent against 1917-18 excess estimate allowances	Total	Charges Received	Amount spent against 1917-18 excess allowances		
Direct Charges—							
Works	..	2,01,701	241,472	1,48,675	..	9,35,757	
Establishment	..	2,14,500	20,446	2,64,242	..	2,64,242	
Tools and Plant	..	22,451	13,736	36,023	..	36,023	
Balances to Balances	42,735	..	42,735	
Total	..	2,38,202	33,19,74	12,47,036	10,775	12,47,036	
Less Receipt on Capital Ac- count	..	1,124	..	124	..	124	
Net Total	..	2,37,078	33,19,74	12,47,036	10,775	12,47,036	
Indirect Charges—							
Capitalized statement of Land Revenue	2,694	334	3,028	..	..	3,028	
Leave and Pension Allow- ances	28,576	8,221	36,797	..	..	36,797	
Total	..	31,270	8,555	40,825	..	40,825	
Grand Total	..	31,270	33,19,74	12,47,036	42,735	13,39,074	

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Lower Jhelum Canal Project.

No. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1918-19.

HEADS OF ACCOUNT.	DIRECT CHARGES.			Cost of construction as now estimated	Expenditure against closed Estimate.		
	Imperial.						
	Previous.	1918-19.	Total.				
I.—WORKS.							
J.—HEAD WORKS—		Rs.	Rs.	Rs.	Rs.		
A.—Preliminary Expenses	12,619	...	12,619				
B.—Land	31,772	...	31,772				
C.—Works	21,80,792	41,314	32,21,706				
K.—Buildings	1,84,042	12,746	1,97,687				
O.—Miscellaneous	12,273	...	19,273				
P.—Maintenance	28,020	...	28,020				
TOTAL	31,07,018	51,059	36,61,077				
2.—MAIN CANAL AND BRANCHES—							
A.—Preliminary Expenses	93,683	55	93,738				
B.—Land	2,49,781	..	2,49,781				
D.—Regulators	2,71,296	1,49,014	4,40,300				
E.—Falls and Weirs	2,34,047	..	2,34,047				
F.—(1)—Other Cross Drainage Works	1,20,258	..	1,20,258				
G.—Bridges	6,91,284	..	6,91,284				
H.—Escarpments	4,78,540	..	4,78,540				
J.—Mills	1,07,620	..	1,07,620				
K.—Buildings	10,54,701	7,072	10,54,701				
L.—Cerbitwork	23,05,870	12,563	23,05,870				
M.—Plantations	80,179	..	80,179				
O.—Miscellaneous	46,157	..	46,157				
P.—Maintenance	32,372	..	32,372				
TOTAL	57,83,014	1,68,701	59,11,715				
3.—DISTRIBUTION—							
A.—Preliminary Expenses	61,101	...	61,101				
B.—Land	1,49,812	2,870	1,49,812				
C.—Works	16,52,620	6,277	16,52,620				
J.—Earthwork	13,71,003	21,110	13,71,003				
O.—Miscellaneous	5,14,140	—1,036	5,14,140				
P.—Maintenance	4,663	..	4,663				
TOTAL	36,71,013	20,511	37,00,554				

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Lower Jhelum Canal Project.

NO. 2. CAPITAL ACCOUNTS FORWARD TO END OF 1918-19.

Branch or Account.	Previous Year.			Current Year.		Expenditure on Acc't Balances, estimated	Part of Statement for Acc't Balances, estimated		
	Imports.			Exports.					
	Previous	1918-19.	Total	Rs.	Rs.				
I.—INITIATION AND PREPARATIVE WORKS—									
A.—Preliminary Expenses	21,771	..	21,771			
B.—Land	17,671	..	17,671			
C.—Works	2,884	..	2,884			
D.—Earthwork	82,727	..	82,727			
E.—Miscellaneous	1,117	..	1,117			
		Total	..	123,483	..	123,483			
		Total I.—WORKS	..	123,483	..	123,483	123,483		
II.—ESTABLISHMENT.									
F.—Direction	1,017,274	..	1,017,274			
G.—Executive	12,553	..	12,553			
H.—Medical	2,770	..	2,770			
I.—Fiscal Survey	49,472	..	49,472			
		Total	..	1,161,479	..	1,161,479	1,161,479		
III.—TOOLS AND PLATES.									
J.—Navigation Plant			
K.—Maintenance	2,91,724	..	2,91,724			
L.—Repairs and Carriage	62,876	..	62,876			
		Total	..	374,500	..	374,500	374,500		
IV.—SUSPENSE ACCOUNT.									
M.—Over	5,07,070	..	5,07,070			
N.—Free Purchase	-7,821	..	-7,821			
O.—Spare Parts	1,031	..	1,031			
P.—Miscellaneous Advances	4,652	..	4,652			
Q.—London Stores			
		Total	..	5,01,659	..	5,01,659	5,01,659		
		GRAND TOTAL.	..	1,161,479	..	1,161,479	1,161,479		
V.—LESS RECEIPTS ON CAPITAL ACCOUNT									
		Net Total	..	1,009,820	..	1,009,820	1,009,820		
VI.—ADDITIONS.									
19.—Initiation Works	1,50,32,671	..	1,50,32,671			

(a) Excludes Accrued Establishment charges from 1918-19 to 1917-18.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Lower Jhelum Canal Project.

No 3—REVENUE ACCOUNT FOR AND TO END OF 1918-19.

RECEIPTS	IMPERIAL.			CHARGES.	IMPERIAL.			
	Previous.	1918-19	Total.		Previous.	1918-19	Total.	
					Rs.	Rs.	Rs.	
Occupiers' rates	2,83,53,441	26,17,774	3,15,71,215	1.—EXTENSIONS AND IMPROVEMENTS.	4,52,427	35,379	4,87,805	
Sales of water	1,18,047	10,554	1,28,631	2. HEAD WORKS ...	2,00,242	6,674	2,06,916	
Supply of towns	5,650	967	6,526	3. MAIN CANAL AND BRANCHES.	2,83,392	10,479	2,93,871	
Receipts from Plantations	36,571	6,915	43,386	4. DRAINAGE AND PROTECTIVE WORKS.	8,290	1,341	9,631	
Receipts from other Canal produce.	10,907	629	11,536	TOTAL 1 ...	9,44,351	54,873	9,98,224	
Water power	2,11,459	31,154	2,43,017	2.—MAINTENANCE AND REPAIRS.			—	
Rent of Buildings	99,063	6,071	1,05,134	1. HEAD WORKS ...	8,11,674	46,871	8,57,345	
Fines	11,707	622	12,320	2. MAIN CANAL AND BRANCHES.	20,91,925	1,03,209	21,95,134	
Miscellaneous and other Receipts.	1,24,415	8,430	1,32,854	3. DISTRIBUTAPIERS.	19,04,272	1,14,251	20,18,523	
Total	2,95,71,560	26,83,050	3,22,51,620	4. DRAINAGE AND PROTECTIVE WORKS.	72,190	1,284	73,473	
				TOTAL 2 ...	48,79,861	2,61,614	51,44,475	
Share of Land Revenue collected in the Civil Department.	1,11,33,273	15,22,709	1,26,57,982	3.—COMPENSATION.	5,847	332	6,179	
Interest on sale proceeds of waste lands benefited	7,89,161	— 71,473	8,00,634	4.—ESTABLISHMENT.	5,55,464			
				5.—DIRECTION AND ACCOUNT				
				6. EXECUTIVE ESTABLISHMENT.	23,74,303			
				7. MEDICAL Do.	1,42,725			
				7A.—REVENUE Do.	25,87,871			
				TOTAL ...	56,60,363	4,62,900	61,23,263	
				8.—TOOLS AND PLANT				
				1. SCIENTIFIC INSTRUMENTS AND DRAWING MATERIALS,	5,123			
				2. PLANTS AND MACHINERY	30,795			
				3. TOOLS ...	5,787			
				4. NAVIGATION PLANTS	1,060	13,800	2,18,036	
				5. CAMP EQUIPAGEM ...	268			
				6. LIVESTOCK ...	5,14			
				7. OFFICE FURNITURE	6,558			
				8. MISCELLANEOUS ...	51,691			
				9. REPAIRS AND CAPRICA-	93,524			
				A.G.E.				
				TOTAL ...	2,04,344	13,000	2,18,036	
				6.—REFUNDS OF REVENUE	10,470	140	10,610	
				7.—PROFIT AND LOSS				
				TOTAL ...	1,17,05,234	7,95,549	1,25,00,787	
				Indirect Charges debitable to Revenue Account as per Account No. 5	7,91,326	64,606	8,55,132	
Total	1,18,22,434	15,04,162	1,33,10,616	TOTAL CHARGES ..	1,21,98,561	8,60,355	1,33,58,919	
TOTAL RECEIPTS	4,14,91,005	12,77,841	4,57,71,244	Balance Net Revenue ..	2,89,95,139	31,10,890	3,24,12,325	
				GRAND TOTAL ...	4,14,91,003	42,77,211	4,57,71,311	

(b) Includes Rs. 71,921, on account of fees for Collection of Revenue.

(c) Excludes share of Accounts Establishment from 1918-19 to 1917-18.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Lower Jhelum Canal Project.

No. 4.—INTEREST ACCOUNT FOR AND TO END OF 1918-19.

	Amount.			Amount.
	Rs.			Rs.
Total Interest charged to end of 1917-18	82,04,540	Net Revenue realized to end of 1917-18	..	5,51,91,175
Do. for the year 1918-19	..	Do. during 1918-19	..	3,11,586
Total outlay to end of 31st March 1918 (Rs. 1,62,65,54)				
Deduct ½ outlay during 1918-19	2,31,312			
Mean Capital at charge	1,60,34,227			
Interest at 3.4814%	8,44,612			
Total	91,67,412			
Balance Revenue after defraying interest charges	5,51,91,175			
Total	3,23,11,312	Total	3,74,12,525	

No. 5.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1918-19.

Peculiar.	Previous	1918-19	Total.
	Rs.	Rs.	Rs.
CAPITAL—			
Capitalization of statement of Land Revenue	8,11,872	8,11,872
Leave and Pension Allowances	3,02,452	16,236
Total	..	11,14,324	44,350
REVENUE—			
Capitalization of statement of Land Revenue	572	572
Leave and Pension Allowances	7,02,452	64,904
Total	..	7,03,024	64,904
GRAND TOTAL	..	11,85,796	81,064
			12,66,830

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Lower Jhelum Canal Project.

No. 6.—STATEMENT COMPARING CHARGES TO DATE WITH SANCTIONED ESTIMATE.

PARTICULARS.	CHARGES AGAINST CLOSED SANCTIONS.			CURRENT SANCTIONS.			Total charges to date against old and current sanctions.	REMARKS.
	Expenditure against Construction Estimate.	Expenditure against open canal sanctions.	Total.	Charges to date.	Amount of Sanctioned Estimate.	Unspent Balance of Estimate.		
DIRECT CHARGES.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Secretary's No	
Works	1,20,74,493	25,220	1,26,99,713	4,05,596	6,14,433	1,18,637	1,31,95,369	1088 27-3-19 1086 27-3-19 1742 11-5-18 1150 W.I 04-18 1728 W.I. 10-5-18 0141 W.I. 31-5-18 0123 W.I. 29-5-18 061 W.I. 22-5-18 0904 W.I. 20-5-18 1039 W.I. 3-9-18 0440 W.I. 3-7-18 1181 W.I. 18-9-18 2552 W.I. 21-11-18 2554 W.I. 27-11-18 3421 9-12-18
Establishment	..	21,80,958	1,38,850	23,20,408	..	1,32,757	1,32,757	23,20,408
Tools and Plant	..	3,62,050	12,832	3,75,788	..	0,036	0,030	3,75,788
Suspense Balances	..	..	..	4,83,028	..	-4,13,928	4,33,925	
Total	..	1,52,28,307	1,73,662	1,54,01,960	9,20,621	7,66,226	-1,73,295	1,63,31,490
Less Receipts on Capital Account.	62,600	..	62,600	..	..	..	62,600	Govt. of India Secretary's
Net Total	..	1,51,65,608	1,73,602	1,53,30,360	9,29,521	7,56,226	-1,73,290	1,62,68,881
INDIRECT CHARGES. Capitalized abatement of Land Revenue.	83,000	..	83,000	..	..	..	83,000	Is. No.
Leave and Pension Allowances.	3,08,721	16,977	3,25,698	..	..	..	3,25,698	"
Total	..	3,08,721	18,977	(b) 4,08,098	..	..	4,08,098	"
GRAND TOTAL	..	1,55,55,417	1,92,630	1,57,48,065	9,29,521	7,56,226	-1,73,295	1,66,77,579

(a) Includes Rs. 2,05,833 actual direct Expenditure on Shahpur Imperial Canal.

(b) Includes Rs. 998 on account of indirect Expenditure on Shahpur Imperial Canal.

Both the above will be transferred to the debit of this project Canal on completion of the Shahpur branch of the Lower Jhelum Canal, *viz.* Secy.'s P.W.D. Branch, No. 085 A. I., dated 7th June 1902.

(c) Revised project estimate sanctioned in Secy. of State's despatch No. 5, dated 10-2-1905.

IRRIGATION BRANCH.

PUNJAB PROVINCE,

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Indus Inundation Canals Project.

No. 2—CAPITAL ACCOUNT FOR AND TO END OF 1918-19.

HEAD OF ACCOUNT	DIRECT CHARGES			Cost of Construction as per Statement of Construction Estimate closed on 31st March 1918	Expenditure up to date closed Estimates		
	Previous Year		1918-19				
	Rs.	Rs.	Rs.				
I.—WORKS.							
2.—Main Canal and Branches							
A.—Preliminary Expenses	9,214	...	9,214		
B.—Land	53,115	...	53,115		
C.—Regulators	77,501	...	77,501		
D.—Falls and Weirs	31,675	...	31,675		
E.—River and Hill Terret Works	401	...	401		
F.—Bridges	45,971	...	45,971		
G.—Escapes	11,621	...	11,621		
H.—Boilings	1,41,027	...	1,41,027		
I.—Earthwork	19,72,157	...	19,72,157		
O.—Miscellaneous	24,754	...	24,754		
Total			17,62,156	17,62,156			
3.—DISTRIBUTION							
A.—Preliminary Expenses	3,847	...	3,847		
B.—Land	26,15	...	26,15		
C.—Works	76,411	...	76,411		
L.—Earthwork	1,65,147	...	1,65,147		
O.—Miscellaneous	8,831	...	8,831		
TOTAL			3,15,216	—371	3,14,845		

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Indus Inundation Canals Project,

No. 2—CAPITAL ACCOUNT FOR AND TO END OF 1918-19.

HEADS OF ACCOUNT	DIRECT CHARGES.			Cost of construction as now estimated (Construction estimate closed on 31st March 1894)	Expenditure against closed Estimate.		
	Imperial.						
	Previous.	1918-19.	Total.				
4. DRAINAGE AND PROTECTIVE WORKS—	Rs.	Rs.	Rs.	Rs.	Rs.		
K.—Buildings	1,613	...	1,613				
L.—Earthwork	3,43,078	..	3,43,078				
TOTAL	3,44,691	..	3,44,691				
TOTAL I.—WORKS	24,22,377	—331	24,22,046	24,22,046	24,22,046		
II.—ESTABLISHMENT.							
5. DIRECTION AND ACCOUNT (a)	1,11,879	—90	4,58,458				
6. EXECUTIVE	3,46,607						
7. MEDICAL	567	..	567				
TOTAL	4,59,113	—90	4,59,023	4,59,023	4,59,023		
III.—TOOLS AND PLANT.							
12. MISCELLANEOUS	25,083	—3	25,080				
13. REPAIRS AND CARRIAGE							
TOTAL	25,083	—6	25,080	25,080	25,080		
IV.—SUSPENSE ACCOUNT.							
14. STOCK	56,280	2,733	59,013				
15. STOCK PURCHASES .. .. ..	..	—222	—222			
16. MISCELLANEOUS ADVANCES	1,118	—846	272				
18. LONDON STORES .. .. ..	..	—	—			
TOTAL	57,398	1,665	59,063				
GRAND TOTAL	29,63,971	1,241	29,65,212	29,66,140	29,66,143		
V. LESS RECEIPTS ON CAPITAL ACCOUNT	63,616	236	63,852	63,852	63,862		
Net Total	29,00,355	1,005	29,01,360	28,42,297	28,42,297		
APPORTIONMENT.							
40. IRRIGATION WORKS...	21,77,842	1,005	21,78,847				
43. M. W. NAVIGATION, IMPERIAL	7,22,513		7,22,513				

(a) Excludes share of Accounts Establishment from 1912-13. to 1917-18.

IRRIGATION BRANCH.
OFFICE OF ACCOUNTANT-GENERAL.
PUNJAB PROVINCE.
ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.
Indus Inundation Canals Project.
No. 3—REVENUE ACCOUNT FOR AND TO END OF 1918-19.

Receipts.	Interest.			Charges	Interest.		
	Previous	1918-19	Total		Previous	1918-19	Total
6. EXTENSIONS AND IMPROVEMENTS.							
Ocuppies' rates ..	Rs 25,21,204	Rs 1,11,384	Rs 26,32,588	2.—Main Canal and Branches 3.—Intermittent 4.—Drainage and Protection Works.	Rs 10,34,589	Rs 10,437	Rs 10,34,606
Owners' rates on irrigated land ..	92,140	..	92,140	Total I. A	Rs 10,251	Rs 2,773	Rs 12,024
Sale of water ..	6,167	14	6,181	2.—MAINTENANCE AND REPAIRS, 3.—Main Canal and Branches, 4.—Drainage and Protection Works.	Rs 2,751	Rs 95,977	Rs 98,728
Supply of town ..	1,416	..	1,416	Total I. B	Rs 1,71,607	Rs 2,02,012	Rs 2,03,619
Receipts of plantations ..	1,37,404	5,150	1,42,554	5.—IRRIGATION EQUIPMENT 6.—FURNITURE AND ACCENTS	6,22	..	6,22
Govt. share of Dhundi Produce ..	11,61,670	..	11,61,670	7.—IRRIGATION ESTAB. 8.—MISCELLANEOUS	55,92,114	5,702	59,62,336
Receipts from other Canal Producers ..	6,387	83	6,470	9.—IRRIGATION EQUIPMENT 10.—PLANTATION EQUIPMENT	7,10,321	22,502	7,32,823
Rent of Buildings ..	..	..	..	Total ..	15,72,321	1,74,012	17,46,333
Fines ..	70,446	880	71,326	1.—TOOLS AND PLANT	..	..	..
Miscellaneous and other receipts ..	..	..	..	2.—SALVAGED IRON 3.—IRON AND IRON 4.—PLANT & MACHINERY	672	..	672
Total ..	39,08,374	2,00,517	41,08,891	5.—TOOLS	..	412	412
Contribution of Bill Clearance ..	4,15,934	..	4,15,934	6.—NAVIGATION PLANT	34	..	34
Clearance Rates ..	12,78,607	..	12,78,607	7.—CAMP EQUIPMENT	212	..	212
Total ..	67,93,483	2,00,517	69,93,980	8.—LIVE STOCK	..	..	..
Share of Land Revenue collected in the Civil Department ..	1,10,09,146	2,29,313	1,12,38,459	9.—OFFICER FURNITURE	722	..	722
Interest on sale-prices of waste lands benefited ..	Rs —	40	Rs 40	10.—REPAIRS & CLEANING	34,572	..	34,572
Total ..	1,10,09,186	2,29,273	1,12,37,859	11.—MISCELLANEOUS	37,874	..	37,874
TOTAL RECEIPTS ..	1,67,08,478	4,29,790	1,71,32,268	Total ..	73,061	1,350	74,411
				Indirect Charges debited to Revenue Acc. unit as per Account No. 3.	6,93,062	16,022	7,11,087
				Total Charges ..	1,73,10,702	2,20,816	1,93,91,278
				Balance Net Revenue ..	13,72,036	1,63,004	15,35,040
				GRAND TOTAL ..	1,67,08,328	4,29,790	1,71,32,214

(a) Excludes share of accounts established from 1912-13 to 1917-18.

(b) Includes Rs. 6,476 on account of Fee for collection of Revenue.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Indus Inundation Canals Project.

No. 4.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1918-19

	Amount,		Amount,		
	Rs	Rs	Rs		
Total Interest charges to end of 1917-18	21,36,965	Net Revenue realized to end of 1917-18..	15,72,036		
Do for the year 1918-19	..	Do. during 1918-19..	1,68,904		
Total outlay to 31st March 1919	29,01,360	Balance net Interest charges	7,07,027		
Less half outlay during 1918-19	502				
	<u>29,00,858</u>				
Mean capital charge	..				
Interest at 3-4% ¹²	..	1,01,032			
	<u>1,01,032</u>				
Total	..	22,17,907	Total	..	22,17,907

No. 5.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1918-19.

	Particulars.			Previous	1918-19	Total.
	Rs	Rs	Rs	Rs	Rs	Rs
CAPITAL—						
Capitalisation of abatement of Land Revenue	..	..	..	8,657	8,657	8,657
Leave and Pension Allowances	..	..	..	71,741	—13	71,728
	<u>Total</u>	<u>..</u>	<u>..</u>	<u>80,398</u>	<u>—13</u>	<u>80,385</u>
REVENUE—						
Capitalisation of abatement of Land Revenue	..	..	..	26,358	325	26,683
Leave and Pension Allowances	..	..	..	6,69,507	14,707	6,84,214
	<u>Total</u>	<u>..</u>	<u>..</u>	<u>6,96,065</u>	<u>18,82</u>	<u>7,11,887</u>
	<u>GRAND TOTAL</u>	<u>..</u>	<u>..</u>	<u>7,76,483</u>	<u>18,019</u>	<u>7,94,482</u>

No. 6.—STATEMENT COMPARING CHARGES TO DATE WITH SANCTIONED ESTIMATE.

PARTICULARS	CHARGES AGAINST CLOSING SANCTIONS.			CURRENT SANCTIONS			Total charges to date against old and current sanctions	REMARKS
	Expenditure against Construction Estimate	Expenditure against open canal sanctions.	Total.	Charges to date.	Amount of Sanctioned Estimate	Unspent Balance Estimate		
DIRECT CHARGES—								
Works	Rs. 6,03,648	Rs. 17,59,398	Rs. 24,22,046	Rs. ..	Rs. ..	Rs. 24,22,046	Rs. 24,22,046	
Establishment	17,24,759	3,71,818	21,06,577	4,59,023	..	..	4,59,023	
Tools and Plant	1,070	24,410	25,080	..	..	..	25,080	
Suspense Balances	..	..	..	50,003	..	—50,003	50,003	
	<u>7,51,522</u>	<u>21,54,027</u>	<u>29,00,140</u>	<u>50,003</u>	<u>..</u>	<u>—50,003</u>	<u>29,65,212</u>	
Less Receipts on Capital Account	63,610	236	63,652	..	..	..	63,652	
	<u>63,610</u>	<u>236</u>	<u>63,652</u>	<u>..</u>	<u>..</u>	<u>..</u>	<u>63,652</u>	
	<u>NET TOTAL</u>	<u>6,57,910</u>	<u>21,54,391</u>	<u>29,12,217</u>	<u>50,003</u>	<u>..</u>	<u>—50,003</u>	<u>29,01,380</u>
INDIRECT CHARGES—								
Capitalized abatement of Land Revenue, Leave and Pension Allowances.	57	8,600	8,657	..	..	..	8,657	
	19,672	62,058	71,728	..	..	..	71,728	
	<u>TOTAL</u>	<u>19,729</u>	<u>60,668</u>	<u>80,385</u>	<u>..</u>	<u>..</u>	<u>80,385</u>	
	<u>GRAND TOTAL</u>	<u>7,76,483</u>	<u>22,15,047</u>	<u>29,22,082</u>	<u>50,003</u>	<u>..</u>	<u>—50,003</u>	<u>29,81,745</u>

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Upper Chenab Canal Project.

No. 7-CAPITAL ACCOUNT FOR AND TO END OF 1918-19.

Head or Account.	DIRECT CHARGE.			Cost of construction estimated to date 1st March, 1919.	Expenditure against Estimated Expenditure.		
	January						
	Previous	1918-19.	Total				
1—WORKS.							
1.—Branch Works—		Rs.	Rs.	Rs.			
A.—Preliminary Expenses ... ..	... ..	3,741	... ..	3,741	
B.—Land ... ..	... ..	61,615	... ..	61,615	
C.—Works ... ..	... ..	15,11,161	... ..	15,11,161	
D.—Buildings ... ..	... ..	1,69,539	2,063	1,70,602		
E.—Miscellaneous ... ..	... ..	63,221	22,733	85,954		
F.—Maintenance ... ..	... ..	1,37,317	... ..	1,37,317	
G.—Losses of Stock ... ..	... ..	7,317	... ..	7,317	
	TOTAL	20,60,433	24,031	20,84,467			
2—MAIN CANAL AND BRANCHES—							
A.—Preliminary Expenses ... ..	... ..	77,625	13%	77,741		
B.—Land ... ..	... ..	6,71,914	... ..	6,71,914	
C.—Regulators ... ..	... ..	7,03,667	4,595	7,03,662		
D.—Pales and Weirs ... ..	... ..	6,50,027	... ..	6,50,027	
E.—Other Cross Drainage Work ... ..	... ..	21,74,458	... ..	21,74,564	
F.—Bridge ... ..	... ..	17,2,130	10,221	17,2,351		
G.—Buildings ... ..	... ..	5,7,731	1,437	5,7,644		
H.—Earthwork ... ..	... ..	10,43,777	... ..	10,43,777	
I.—Plantations ... ..	... ..	54,392	2,743	55,636		
J.—Miscellaneous ... ..	... ..	69,373	474	69,747		
K.—Maintenance ... ..	... ..	3,20,677	... ..	3,20,677	
L.—Losses of Stock ... ..	... ..	12,874	... ..	12,874	
	TOTAL	1,46,16,303	41,435	1,49,77,628			
3.—DECOMMISSIONING—							
A.—Preliminary Expenses ... ..	... ..	1,43,439	302	1,43,741		
B.—Land ... ..	... ..	6,52,547	3,174	6,55,720		
C.—Works ... ..	... ..	16,17,703	14,502	16,52,205		
D.—Earthwork ... ..	... ..	10,10,998	27,421	10,32,019		
E.—Miscellaneous ... ..	... ..	3,71,219	—58,492	3,12,720		
F.—Maintenance ... ..	... ..	14,308	... ..	14,308	
	TOTAL	47,32,700	—13,089	47,19,710			

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Upper Chenab Canal Project.

No. 2—CAPITAL ACCOUNT FOR AND TO END OF 1918-19.

HEADS OF ACCOUNT.	DIRECT CHARGES.			Cost of construction as now estimated (Construction estimate closed on 31st March 1917.)	Expenditure against closed estimates.		
	Imperial.						
	Previous.	1918-19	Total				
I.—DRAINAGE AND PROTECTIVE WORKS—							
A.—Preliminary Expenses ..	0,286	1,229	10,515				
B.—Land	1,04,252	729	1,04,961				
C.—Works	40,800	..	40,800				
L.—Earthwork	10,16,121	78	10,16,202				
O.—Miscellaneous	17,367	15	17,382				
TOTAL	12,17,820	2,051	12,19,880	..	..
TOTAL I.—WORKS	2,77,87,261	54,481	2,78,41,005	2,79,30,947	2,77,74,755		
II.—ESTABLISHMENT.							
5. DIRECTION	10,94,550						
6. EXECUTIVE	32,33,430	16,110	44,80,380				
7. MEDICAL	1,37,290	..					
8. SPECIAL SURVEY	82,573	..	82,573				
6½. SPECIAL FIELD SURVEY	110	..	110				
LEAVE AND PENSION ALLOWANCES .. ..	..	..	..	
TOTAL	45,47,962	16,110	46,63,072	46,86,042	46,63,072		
III.—TOOLS AND PLANT.							
1. SCIENTIFIC INSTRUMENTS AND DRAWING MATERIALS ..	688	..	688				
2. PLANT AND MACHINERY	5,221	..	5,221				
3. TOOLS	2,250	..	2,250				
4. NAVIGATION PLANT	1,161	..	1,161				
5. CAMP EQUIPAGE	35	..	35				
6. LIVE STOCK	874	..	874				
7. OFFICE FURNITURE	1,961	54	2,015				
8. REPAIRS AND CARRIGE	1,25,894	—49	1,25,845				
11. RAILWAY PLANT AND ROLLING STOCK	8,55,370	..	8,55,370				
12. MISCELLANEOUS	11,08,873	538	11,09,411				
TOTAL	21,92,027	543	21,92,570	21,04,104	21,92,570		
IV.—SUSPENSE ACCOUNT.							
14. STOCK	7,96,438	—62,416	7,34,022				
15. STOCK PURCHASES	—3,500	1,793	—1,713				
16. STOCK SALES	14,834	—14,708	36				
16. MISCELLANEOUS ADVANCES	4,692	1,875	6,067				
17. LONDON STORES .. ..	..	..	..	
TOTAL	8,12,458	—74,046	7,38,412	..	..
GRAND TOTAL	3,63,39,711	—3,662	3,63,35,749	3,47,10,090	3,45,30,397		
V.—LESS RECEIPTS ON CAPITAL ACCOUNT.							
N.R.T. TOTAL ..	5,59,865	4,102	5,64,077	5,64,067	5,64,067		
49. IRRIGATION WORKS	3,47,70,846	—8,154	3,47,71,692	3,41,46,933	3,39,66,310		
43. M. W. AND NAVIGATION	3,46,71,975	—8,164	3,46,63,821	..	..
	1,07,871	..	1,07,871	..	..

(a) Share of accounts Establishment excluded from 1912-13 to 1917-18.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Upper Chonab Canal Project.

No. 3.—REVENUE ACCOUNT FOR AND TO END OF 1918-19.

Receipts,	INTERNAL,			CHARGES,	INTERNAL,			
	Previous,	1918-19.			Previous,	1918-19.		
		Re.	Rs.	Total,		Re.	Rs.	
Occupiers' rates... ..	Rs. 6,47,744	16,23,924	16,23,924	+ 2,37,302	(I) — EXTENSIONS AND IMPROVEMENTS, 1.— Head Works ..	Rs. 39,737	2,410	41,947
					2.— Main Canal & Branches ..	2,87,912	16,920	2,84,932
					3.— Irrigation Works ..	8,674	5,152	13,826
					4.— Drainage and Protective Works ..	..	45	45
Sale of water	Rs. 2,514	607	607	2,602	Total (I) ..	39,737	2,410	41,947
					2.— MAINTENANCE AND REPAIRS ..			
Water supply of towns	Rs. 1,614	..	..	1,614	1.— Head Works ..	2,85,444	75,277	3,60,721
					2.— Main Canal & Branches ..	8,23,764	5,86,717	11,00,481
					3.— Irrigation Works ..	2,42,144	2,25,777	4,67,921
					4.— Drainage Works ..	1,0,486	0,1,127	1,1,613
Receipts from plantations	Rs. 1,07	450	450	2,621	Total (II) ..	20,93,974	1,23,061	22,19,035
					(II) — COMPENSATION ..	8,480	6,824	15,304
					(III) — ESTABLISHMENT, 1.— Issues & Anti-Accours ..	1,38,073	..	1,38,073
Receipts from other Canal revenue	Rs. 1,791	324	324	1,721	2.— Miscellaneous Expenditure and Accours ..	8,26,472	3,5,724	10,02,064
					3.— Revenues ..	7,30,614	1,76,000	9,06,614
Rent of buildings	Rs. 70,279	6,316	6,316	35,765	Total (III) ..	13,95,999	8,36,774	18,34,973
					(IV) — TOOLS AND PLATES ..			
Fines	Rs. 4,173	1,721	1,721	2,952	1.— Irrigation Instruments and Irrigation Materials ..	— 627		
					2.— Iron and Machinery ..	2,389	7,557	33,941
					3.— Miscellaneous ..	14,012		
					4.— Repairs and Carriage ..	11,862		
Miscellaneous and other receipts	Rs. 22,299	30,423	30,423	1,18,732	Total ..	27,914	6,827	33,741
					(V) — REIMBURSEMENT OF RE- VENUE ..	6,039	628	6,614
TOTAL	Rs. 65,73,310	18,67,071	18,67,071	84,44,300	Total ..	35,68,870	12,24,084	40,92,954
Interest on sale of proceeds of waste lands benefited	Rs. 10,208	1,15,623	1,15,623	3,31,923	Indirect charges debitable to Revenue Account as per Account No. 8.	1,63,625	75,122	2,38,747
Share of land revenue	Rs. 6,70,816	3,824	3,824	6,64,690	Total charges ..	10,84,204	12,81,881	23,66,585
Collected in the Civil Depart- ment	Rs. 77,264	1,10,169	1,10,169	0,06,413	Balances Net Revenue ..	33,64,970	7,07,350	40,71,410
TOTAL RECEIPTS	Rs. 74,52,683	19,85,220	19,85,220	84,40,603	GRAND TOTAL ..	74,62,643	19,85,223	94,40,863

(a).—Includes Rs. 46,161 on account of fees for collection of revenue.

(b).—Excluding Share of Account of Establishment from 1915-16 to 1917-18.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Upper Chenab Canal Project

No. 4.—INTEREST ACCOUNT FOR AND TO END OF 1918-19

	Amount.		Amount.
Total Interest charges to end of 1917-18 Do. for the year 1918-19	Rs. 65,00,856	Net revenue realized to end of 1917-18 Do. during 1918-19	Rs. 33,68,070 7,06,329
Total outlay to end of 31st March 1918 3,47,71,692		Balance, net interest charges	.. 66,46,263
Less half outlay during 1918-19 .. -4,077			
Mean capital at charge .. 3,47,75,769	12,10,823		
Interest at 3% per cent			
Total .. 1,07,20,631		Total ..	1,07,20,631

No. 5.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1918-19.

PARTICULARS.	Previous.			1918-19.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.
CAPITAL—					
Capitalization of abatement of Land Revenue	3,66,375	..	..	..	3,66,375
Leave and Pension Allowances	6,31,500	2,115	2,115	2,115	6,31,500
Total	9,98,875	2,115	2,115	2,115	9,98,875
REVENUE—					
Capitalization of abatement of Land Revenue	200	50	50	50	250
Leave and Pension Allowances	1,85,425	76,472	76,472	76,472	2,70,897
Total	1,85,625	76,472	76,472	76,472	2,71,147

No. 6.—STATEMENT COMPARING CHARGES TO DATE WITH SANCTIONED ESTIMATE

PARTICULARS.	CHARGES AGAINST CLOSERD SANCTIONS			CURRENT SANCTIONS.			Total charges to date against old and current sanctions.	REMARKS.		
	Expenditure against Construction Estimate.	Expenditure against open canal sanction.	Total.	Charges to date.	Amount of Sanctioned Estimate.	Unspent Balance of Estimate.				
DIRECT CHARGES—										
Works ..	2,75,69,192	2,16,502	2,77,74,750	80,810	1,86,192	80,282	2,78,41,603			
Establishment ..	41,97,533	76,739	45,63,072	..	22,970	22,470	45,61,072	Banction to the completion schedule is awaited.		
Tools and Plant ..	21,90,148	2,4,2	21,92,670	..	1,831	1,531	21,92,570			
Suspense Balances ..	..	..	..	7,38,412	..	-7,38,412	7,38,412	
Total ..	3,42,36,073	2,43,724	3,45,39,207	8,05,362	1,80,595	-6,24,759	3,83,36,740			
Less Reciprocate on Capital Acc. cont.	5,59,966	4,192	5,64,057	..	..	..	5,64,057	
Net Total ..	3,36,76,003	2,49,532	3,39,66,340	8,05,352	1,80,595	-6,24,759	3,47,71,692			
INDIRECT CHARGES—										
Capitalized abatement of Land Revenue ..	3,59,680	0,725	3,60,375	..	..	..	3,60,375	
Leave and Pension Allowances ..	6,20,897	10,003	6,31,600	..	..	..	6,31,600	
Total ..	9,80,574	17,328	9,97,975	..	..	..	9,97,975	
GRAND TOTAL ..	3,16,67,365	8,06,860	3,49,04,216	8,05,352	1,80,595	-6,24,759	3,57,09,667			

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Lower Bari Doab Canal Project.

NO. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1918-19.

BRANCH OF ACCOUNT.	Budget Estimate.			Cost of construction now estimated at instruction date 31st March 1917.	Expenditure against closed Esti- mation.		
	Imperial.						
	Previous.	1918-19.	Total.				
I.—WORKS.							
I. 1. Head Works—							
A.—Preliminary Expenses	15,500	..	15,500		
B.—Land	2,23,055	2,072	2,23,117		
C.—Works	47,43,625	3,375	47,47,000		
E.—Buildings	1,07,157	0,846	1,07,003		
O.—Miscellaneous	2,392	..	2,392		
P.—Maintenance	7,101	..	7,101		
Q.—Loosen Stock	1,310	..	1,310		
Total.	..	22,55,070	14,727	22,55,817			
I. 2. Main Canal and Branches—							
A.—Preliminary Expenses	1,62,575	..	1,62,575		
B.—Land	18,125	—211	18,057		
D.—Register	1,27,700	..	1,27,700		
E.—Dals and Weirs	4,15,575	..	4,15,575		
F.—River and Hill Tercent Works	671	..	671		
P. (1) + Other Canal Drainage Works	..	4,23,975	..	4,23,975			
G.—Bridges	4,70,975	..	4,70,975		
H.—Escapes	6,525	..	6,525		
J.—Mills	1,017	1,017		
K.—Buildings	31,51,277	52,724	32,03,001		
L.—Earthwork	32,37,183	..	32,37,183		
M.—Plantations	1,47,555	4,962	1,52,517		
O.—Miscellaneous	35,312	65	35,377		
P.—Maintenance	2,07,302	634	2,13,142		
Q.—Loosen Stock	4,252	..	4,252		
Total.	..	67,11,151	8,182	67,19,333			
I. 3. DISTRIBUTION—							
A.—Preliminary Expenses	1,61,147	3,04	1,61,181		
B.—Land	1,55,257	11,395	1,67,652		
C.—Works	10,00,763	57,372	10,07,135		
L.—Earthwork	18,41,749	21,417	18,73,166		
O.—Miscellaneous	14,59,626	—9,400	14,60,216		
P.—Maintenance	31,449	..	31,449		
Total.	..	46,15,431	63,522	47,00,712			
I. 4. DRAINAGE AND PROTECTIVE WORKS—							
A.—Preliminary	8,710	74	8,784		
B.—Land	6,491	..	6,491		
C.—Works	3,214	1,700	4,914		
L.—Earthwork	40,147	3,114	43,367		
O.—Miscellaneous	12,014	423	12,441		
Total.	..	70,620	5,341	76,960			
TOTAL I.—WORKS	..	1,66,71,647	2,04,281	1,68,70,478	1,66,85,180		

IRRIGATION BRANCH,

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Lower Bari Doab Canal Project.

NO. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1918-19.

HEAD OF ACCOUNT.	Direct Charges.			Cost of construction as now estimated. (Construction Estimate closed on 31st March 1917).	Expenditure against closed Estimate.		
	Imperial.						
	Previous.	1918-19.	Total.				
II.—ESTABLISHMENT.							
5. DIRECTION AND ACCOUNTS	5,53,632			1,66,82,150			
6. EXECUTIVE	23,10,582	61,765	31,57,679				
7. SPECIAL SURVEY .. ..	..					
TOTAL ..	30,90,114	61,765	31,57,679	32,00,180	31,57,679		
III.—TOOLS AND PLANT.							
1. SCIENTIFIC INSTRUMENTS AND DRAWING MATERIALS ..	2,274						
2. PLANT AND MACHINERY	11,070						
3. TOOLS	2,625						
4. NAVIGATION PLANT	4,684						
5. CAMP EQUIPAGE	1,410	4,010	10,50,744				
6. LIVE STOCK	200						
7. OFFICE FURNITURE	4,217						
8. REPAIRS AND CARRIAGE	1,10,818						
9. MISCELLANEOUS	10,10,020						
10. RAILWAY PLANT AND ROLLING STOCK ..	7,83,454						
TOTAL ..	10,46,701	4,040	10,50,744	10,64,078	10,50,744		
IV.—SUSPENSE ACCOUNT.							
14. STOCK	7,82,437	-97,712	6,84,725				
15. STOCK PURCHASES	-4,707	-102	-4,609				
16. STOCK SALES	400	181	630				
17. MISCELLANEOUS ADVANCES	9,711	20,405	30,206				
18. LONDON INVOICES	-1	+1	-				
TOTAL ..	17,87,610	-77,137	7,10,712	..	..
GRAND TOTAL ..	2,86,05,361	1,03,450	2,20,98,813	2,18,42,408	2,15,00,017		
V.—LESS RECEIPTS ON CAPITAL ACCOUNT	5,10,309	17,032	5,28,001	6,28,001	6,28,001		
NET TOTAL ..	2,19,94,066	1,75,627	2,21,70,812	2,13,14,407	2,09,81,016		
APPORTIONMENT.							
40.—IRRIGATION WORKS	2,18,27,104	1,75,827	2,20,03,261				
43.—M. W. AND NAVIGATION, IMPERIAL	1,07,521	..	1,67,521				

(a) Excludes charges of account Establishment from 1912-13 to 1917-18.

IRRIGATION BRANCH

PUNJAB PROVINCE.

**OFFICE OF ACCOUNTANT-GENERAL.
ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.**

Lower Baris Drab Canal Project.
No. 1—REVENUE ACCOUNT FOR AND TO END OF 1918.

(a) Excludes lists of Accounts Establishment from 1912-13 to 1917-18.
(b) Includes Rs 35,161 on account of Lumberdars fees.

IRRIGATION BRANCH.

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PUNJAB PROVINCE

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Lower Sari Doab Canal Project.

No. 4.—INTEREST ACCOUNT FOR AND TO END OF 1918-19.

	Rs.	Rs.		Rs.
Total Interest charges to end of 1917-18	...	46,54,555	Net Revenue realized to end of 1917-18.,	10,93,577
Do. for the year 1918-19	...	...	Do. during 1918-19	31,21,935
Total outlay to 31st March 1919	2,21,70,812		Balance Interest net charges	8,07,125
Less half outlay during 1918-19	67,913			
Mean capital at charge	...	2,20,82,898		
Interest at 3·4818 per cent.	...	7,68,962		
Total	...	54,23,437	Total	51,21,437

No. 5.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1918-19.

	PARTICULARS.					Previous.	1918-19.	Total.
CAPITAL—						Rs	Rs.	Rs.
Capitalization of Land Revenue	44,050	17	44,225
Leave and Pension Allowances	4,23,717	8,617	4,31,162
Total	46,067	8,822	475,387
REVENUE—								
Leave and Pension Allowances	1,41,617	73,763	2,15,400
Total	1,41,617	73,763	2,15,100

No. 6.—STATEMENT COMPARING CHARGES TO DATE WITH SANCTIONED ESTIMATE.

Particulars.	CHARGES AGAINST CLOSED SANCTIONS.			CURRENT SANCTIONS.			Total charges to date against old and current sanctions.	Remarks.
	Expenditure against Construction Estimate.	Expenditure against open annual sanctions	Total.	Charges to date.	Amount of sanctioned Estimate.	Unspent Balance of Estimate.		
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
DIRECT CHARGES—								
Works ..	1,60,86,886	3,13,528	1,64,00,39	1,79,08	2,81,750	-1,97,323	1,63,70,478	
Establishment ..	30,17,003	1,60,876	31,57,879	...	48,301	48,301	31,57,87	
Tools and Plant ..	10,34,767	15,077	10,50,744	...	3,334	3,334	10,60,744	
Suspense Balances ..	...	...	...	7,10,712	...	-7,10,712	7,10,712	
Total ..	2,10,28,831	4,50,381	2,15,00,017	11,50,791	3,33,31	-6,50,105	2,20,92,813	
Less Receipts on Capital Account ..	5,10,000	17,631	5,28,001	...	...	...	5,24,001	
Net Total ..	2,05,18,831	4,62,719	2,00,81,01	11,33,196	3,33,31	-8,56,405	2,21,70,812	
INDIRECT CHARGES—								
Capitalized statement of Land Revenue ..	49,950	271	44,221	...	...	...	44,225	
Leave and Pension Allowances ..	4,10,040	21,122	4,31,162	...	...	...	4,31,162	
Total ..	4,62,000	21,397	4,75,387	11,80,116	...	...	4,75,387	
GRAND TOTAL ..	2,09,72,257	4,84,148	2,14,56,403	11,60,716	2,33,391	-8,56,405	2,20,46,199	

IRRIGATION BRANCH.

PUNJAB PROVINCE

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19

Upper Jhelum Canal Project.

No. 2—CAPITAL ACCOUNT FOR AND TO END OF 1918-19.

Head or Account.	DIRECT CHARGES.			Capital con- sumed accrued.	
	Imports.		Total		
	Previous	1918-19			
RE.	RE.	RE.	RE.	RE.	
I.—WORKS					
1.—MAIN WORKS—					
A.—Preliminary Expenses	734	734	
B.—Land	21,92	21,92	
C.—Works	1,818	1,818	
D.—Earthwork	1,577	1,577	
E.—Miscellaneous	27,412	27,412	
F.—Maintenance	14,77	14,77	
	Total		85,67	85,67	
2.—MAIN CANAL AND BRANCHES—					
A.—Preliminary Expenses	1,257	1,257	
B.—Land	9,12,194	9,12,194	
C.—Roads &c	33,11,228	33,11,228	
D.—Falls and Weirs	1,11,12	1,11,12	
E.—River and Hill Torrent Works	1,38,57,361	1,38,57,361	
F.—Bridges	1,17,12	1,17,12	
G.—Escapes	23,177	23,177	
H.—Buildings	7,48,634	7,48,634	
I.—Earthwork	1,6,7,06,375	1,6,7,06,375	
M.—Plantation	31,43	31,43	
O.—Miscellaneous	1,1,165	1,1,165	
P.—Maintenance	4,02,0-0	4,02,0-0	
Q.—Losses on Stock	4,577	4,577	
	Total		31,15,27,000	31,15,27,000	
3.—DISTRIBUTORIES—					
A.—Preliminary Expenses	24,67	24,67	
B.—Land	4,67,017	4,67,017	
C.—Works	2,35,268	2,35,268	
L.—Earthwork	7,16,281	7,16,281	
O.—Miscellaneous	4,52,548	4,52,548	
	Total		26,31,315	26,31,315	

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Upper Jhelum Canal Project.

No. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1918-19.

HEADS OF ACCOUNT.	DIRECT CHARGES.			Cost of construction as now estimated.	Expenditure against closed estimates.		
	Imperial.						
	PREVIOUS.	1918-19.	Total.				
6. DRAINAGE AND PROTECTIVE WORKS—							
<i>A.—Preliminary Expenses</i>	7,690	97	7,700		
<i>B.—Land</i>	3	3		
<i>C.—Works</i>	107	820		
<i>D.—Earthwork</i>	613	6,746		
<i>E.—Miscellaneous</i>	1,381	300		
			TOTAL	9,703	8,026		
				17,729			
TOTAL—I.—WORKS	3,42,73,507	2,03,177	3,45,66,741	3,42,80,026		
II.—ESTABLISHMENT.							
6. DIRECTION AND ACCOUNT (a)	10,00,964				
6. EXECUTIVE	38,00,842	1,34,245	50,73,658		
7. MEDICAL	1,37,607			
			TOTAL	4,39,483	1,34,245		
				50,73,658	50,85,931		
					50,73,658		
III.—TOOLS AND PLANT.							
1. SCIENTIFIC INSTRUMENTS AND DRAWING MATERIALS	800				
2. PLANT AND MACHINERY	28,61,602				
3. TOOLS	117			
4. NAVIGATION PLANT	1,940			
5. CAMP EQUIPMENT	568	—801		
7. OFFICE FURNITURE	6,181			
8. REPAIRS AND CARRIAGE	1,67,062			
MISCELLANEOUS	16,56,573			
			TOTAL	40,13,800	—391		
				40,13,415	40,14,271		
					40,13,116		
IV.—SUSPENSE ACCOUNT.							
14. STOCK	8,87,008	—1,05,913	7,81,095		
15. STOCK PURCHASES	—31,831	10,316		
16a. STOCK SALES	4,497	—1,007		
16. MISCELLANEOUS ADVANCES	81,440	—34,132		
17. LONDON INVOICES	2,8,0		
18. LONDON STOCKS	47,308		
			TOTAL	941,004	—131,336		
				8,00,758			
GRAND TOTAL	..	4,47,67,880	2,05,695	4,50,63,575	4,39,80,828		
V.—LESS RECEIPTS ON CAPITAL ACCOUNT	..	6,12,000	3,64,053	9,76,064	9,76,054		
Net Total	..	4,41,55,880	—68,360	4,40,87,621	4,30,13,700		
VI.—APPORTIONMENT.							
49. IRRIGATION WORKS	4,40,88,932	—63,360	4,40,20,573		
43. MINOR WORKS AND NAVIGATION, IMPERIAL	66,948	..	66,948		

(a). Excludes share of Accounts Establishment from 1912-13 to 1917-18.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Upper Jhelum Canal Project.

No. 3--REVENUE ACCOUNT FOR AND TO END OF 1918-19.

Revenue	INCOME			EXPENSE			INCOME		
	Present		Total	Charges			Present		Total
	Rs.	P.	Rs.	(a) EXPENSES AND AMOUNTS RECEIVED BY OTHER WORKERS	(b) EXPENSES OF THE PROJECT BY OTHER WORKERS	Rs.	P.	Rs.	
Water rates ..	6,87,124	7,67,671	14,54,795	12,000	1,87,221	Rs.	P.	Rs.	
	R.	Rs.	Rs.	(1) Other Workers ..	12,000	12,000	12,000	12,000	
				(2) Other Canal and Project Workers ..	1,87,221	1,87,221	1,87,221	1,87,221	
				(3) Other Expenses ..	8,000	8,000	8,000	8,000	
Sale of water ..	1,076	1,174	2,250	2,000	200	Rs.	P.	Rs.	
				(1) Other Workers ..	2,000	2,000	2,000	2,000	
				(2) Other Canal and Project Workers ..	6,000	6,000	6,000	6,000	
				(3) Other Expenses ..	8,000	8,000	8,000	8,000	
Receipts from land ..	779	1,105	1,884	1,000	884	Rs.	P.	Rs.	
				(1) Land Rent ..	1,000	1,000	1,000	1,000	
				(2) Other Expenses ..	884	884	884	884	
Rent of building ..	15,650	5,811	21,462	15,000	650	Rs.	P.	Rs.	
				(1) Rent of Building ..	15,000	15,000	15,000	15,000	
				(2) Other Expenses ..	650	650	650	650	
Fines ..	725	1,214	1,939	1,000	939	Rs.	P.	Rs.	
				(1) Collection of fines ..	1,000	1,000	1,000	1,000	
				(2) Other Expenses ..	939	939	939	939	
Miscellaneous and other Receipts ..	29,914	23,677	63,591	10,000	53,591	Rs.	P.	Rs.	
				(1) Miscellaneous ..	10,000	10,000	10,000	10,000	
				(2) Other Expenses ..	53,591	53,591	53,591	53,591	
				TOTAL ..	9,351	9,351	9,351	9,351	
				(b) REFUNDS OF RE- VENUE ..	134	134	134	134	
				TOTAL ..	17,40,73	6,351	21,25,755		
					10,82	10,82	1,07,473		
Total ..	62,7,036	8,0,513	14,29,529	14,10,025	9,37,545	Rs.	P.	Rs.	
					29,44,251	29,44,251			
TOTAL RECEIPTS ..	6,27,006	8,0,513	14,29,529	Balance, Net Revenue ..	—11,43,742	69,560	—11,19,123		
					GRAND TOTAL ..	6,27,016	8,0,514	14,29,530	

(a) Excludes share of Account Establishment from 1912-13 to 1917-18.
 (b) Includes Rs. 21,782 on account of fee for collecting Revenue.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Upper Jhelum Canal Project.

No. 4—INTEREST ACCOUNT FOR AND TO END OF 1918-19.

	Amount.		Amount.
	Rs.		Rs.
Total Interest charges to end of 1917-18	1,00,37,108	Net revenue realized to end of 1917-18	—11,82,682
Do. for the year 1918-19	...	Net revenue realized during 1918-19	+62,860
Total outlay to 31st March 1919	4,40,87,521	Balance not interest charges	1,26,03,077
Less half outlay during 1918-19	—34,180		
Mean capital at charge			
Interest at 3·481% per cent	4,41,21,701	15,26,229	
Total	..	1,15,73,335	1,15,73,335

No. 5—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1918-19.

Particulars.	Previous.	1918-19.	Total.
	Rs.	Rs.	Rs.
CAPITAL—			
Capitalization of abatement of Land Revenue	1,95,425	11,725	2,07,150
Leave and Pension Allowances	6,86,508	18,794	7,05,302
Total	8,81,433	30,619	9,12,452
REVENUE—			
Capitalization of abatement of Land Revenue	700	...	700
Leave and Pension Allowances	69,126	52,647	1,21,773
TOTAL	69,626	52,647	1,22,173
GRAND TOTAL	9,51,759		

No. 6—STATEMENT COMPARING CHARGES TO DATE WITH SANCTIONED ESTIMATE.

PARTICULARS.	CHARGES AGAINST CLOSED SANCTIONS			CURRENT SANCTIONS			Total charges to date against old and current sanctions.	REMARKS.
	Expenditure against Construction Estimates.	Expenditure against open canal sanctions.	Total.	Charges to date.	Amount of Sanctioned Estimate.	Unspent Balance of Estimate.		
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.		Rs.
DIRECT CHARGES—								
Works ...	3,30,19,625	12,07,068	3,42,26,693	3,40,051	80,935	—2,80,115	3,45,06,744	S. cy. No. 4 77 WI 16,760 7-2-18 074 WI
Establishment ..	47,21,048	3,51,710	50,73,658	..	12,273	12,273	50,73,658	.. No. 21 2-18 17,942
Tools and Plant ..	46,01,077	21,648	46,13,415	..	856	856	46,13,415	
Suspense Balance ...	..	..	..	8,09,759	..	—8,09,759	8,09,759	
Total ..	4,13,35,340	16,80,426	4,30,18,766	11,49,600	73,062	—10,76,747	4,50,63,575	„ No. 1769 WI 23,222, 14-5-18
INDIRECT CHARGES								
Capitalized abatement of Land Revenue.	1,82,800	24,850	2,07,150	..	..	..	2,07,150	
Leave and Pension Allowances	6,56,063	49,239	7,05,302	..	..	..	7,05,302	„ No. 2270 WI 3,417 29-10-18
TOTAL ..	8,38,363	74,089	9,12,452	..	..	..	9,12,452	73,06 2
GRAND TOTAL ...	428,14,7-6	10,35,418	4,38,60,163	11,49,800	13,062	—10,76,747	4,49,99,973	Sanction to the Completion Schedule is awaited.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Shahpur Canal Project - Imperial.

No. 2 - CAPITAL ACCOUNT FOR AND TO END OF 1st APRIL 1919.

HEADS OF ACCOUNT	Direct Cost to			Cost of works for which no estimated construction estimate fixed on 31st March 1918.	Expenditure against year ended
	Prev. Year	1918-19	Total		
I - WORKS.					
2.-MAIN CANAL AND BRANCHES	Rs.	Rs.	Rs.	Rs.	Rs.
<i>A</i> .-Land	... ... ... ... ... ...	3,075 12,157 2,722 7,112 29,574	... ... ... ... ...	3,075 12,157 2,722 7,112 29,574	...............
<i>B</i> .-Pre-dates	...............	...............	...............	...............	...............
<i>C</i> .-Brickes	...............	...............	...............	...............	...............
<i>D</i> .-Buildings	...............	...............	...............	...............	...............
<i>E</i> .-Furniture	...............	...............	...............	...............	...............
<i>F</i> .-Earthworks	...............	...............	...............	...............	...............
	TOTAL	126,711	1,779	128,490	
II - EQUIPMENT TAKES					
<i>G</i> .-Land	... ... ... ... ...	5,211 18,971 21,579	... ... ...	5,211 18,971 21,579	.........
<i>H</i> .-Works	...............	...............	...............	...............	...............
<i>I</i> .-Earthworks	...............	...............	...............	...............	...............
	TOTAL	45,511	-	45,511	
	TOTAL I. WORKS	126,711	1,779	128,490	128,490
III - ESTABLISHMENT.					
<i>J</i> .-DIRECTION	... ... ...	7,048 22,712	7,048 22,712	7,048 22,712	
<i>K</i> .-EXECUTIVE	.........	.........	.........	.........	.........
	TOTAL	30,000	2,720	32,720	32,720
IV - TOOLS AND PLANT.					
<i>L</i> .-MISCELLANEOUS	... ...	860 29	860 29	860 29	
<i>M</i> .-REPAIRS AND CARBAGE	......	...	...	...	...
	TOTAL	819	273	863	863
	GRAND TOTAL	2,05,003	8,767	2,13,690	2,13,690
APPORTIONMENT.					
40.-IRRIGATION Works	... ...	2,05,003 8,767	2,14,690	2,14,690	2,14,690

Note.—Capital and Revenue Accounts of these canals will continue to be prepared separately until the Shahpur Branch of the Lower Jhelum Canal has been constructed and opened for irrigation, vide Secretary to Government, Punjab, P.W.D., Irrigation Branch, letter No. 0-6A/1, dated 7th June 1918.

IRRIGATION BRANCH

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Shahpur Canal Project-Imperial

No. 3.—REVENUE ACCOUNT FOR AND TO END OF 1918-19

RECEIPTS.	IMPERIAL.			CHARGES.	IMPERIAL.		
	Previous.	1918-19.	Total		Previous.	1918-19	Total
	Rs.	Rs.	Rs.	(1).—EXTENSIONS AND IMPROVEMENTS.	Rs.	Rs.	Rs.
Occupiers' rates...	23,72,035	61,479	24,33,514	2.—MAIN CANAL AND BRANCHES	82,238	16	82,254
				3.—DISTRIBUTORIES	14,623	...	14,623
				TOTAL (1)	96,861	16	96,877
Sale of water ...	1,315	..	1,315	(2).—MAINTENANCE AND REPAIRS.			
Receipts from Plantation ...	10,601	..	10,601	2.—MAIN CANAL AND BRANCHES	9,45,362	20,807	9,66,000
				2.—DISTRIBUTORIES	1,32,770	5,092	1,37,862
				TOTAL (2)	7,78,632	26,380	8,04,621
Receipts from other Canal Produce.	3,810	..	3,850	(3).—COMPENSATION	553	..	553
				(4).—ESTABLISHMENT			
Rent of Buildings	1,388	..	1,388	(5).—DIRECTION AND ACCOUNT	85,150		
				6.—EXECUTIVE ESTABLISHMENT	6,17,350		
				7.—DEDICAL DO. ..			
Fines ..	1,860	..	1,860	7A.—REVENUE DO. ..			
				7B.—NAVIGATION DO. ..			
				TOTAL ..	6,02,515	32,408	6,34,923
Miscellaneous and other Receipts.	1,710	..	1,710	(5).—TOOLS AND PLANT.			
				12.—MISCELLANEOUS ..	3,100		
				13.—REPAIRS AND CARRIAGE ..	2,012	1,091	6,212
Total	28,08,780	61,479	24,33,514	TOTAL ..	5,121	1,091	6,212
				6.—REFUNDS OF REVENUE	1,233	..	1,233
Share of Land Revenue collected in the Civil Department.	4,17,302	20,618	4,38,010	TOTAL ..	14,84,015	50,151	15,44,379
				Indirect Charges debitable to Revenue Account as per Account No. 5.	86,823	4,546	90,369
Total	4,17,302	20,618	4,38,010	TOTAL CHARGES ..	15,70,748	56,010	16,34,748
TOTAL RECEIPTS ..	28,18,172	82,097	28,99,269	Balance, not Revenue ..	12,45,434	18,087	12,63,621
				GRAND TOTAL ..	28,18,172	82,097	28,99,269

(a) Includes Rs. 1,920 on Account of fees and allowances for collection of Revenue.
 (b) Excludes share of Accounts Establishment from 1912-13 to 1917-18.

IRRIGATION BRANCH,

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Shahpur Canal Project-Imperial

No. 5—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF MONTH

Particulars	Previous	1918-19	Total		
				Rs.	Rs.
CAPITAL—					
Capitalisation of statement of Land Revenue	..	..	..	1,776	1,776
Leave and Pension Allowances	..	..	..	4,613	4,613
	Total	..	..	6,390	6,390
DRIVE FEES—					
Capitalisation of statement of Land Revenue	..	..	..	10	10
Leave and Pension Allowances	..	..	..	1,710	1,710
	Total	..	..	1,720	1,720
Overhead Tax	..	..	..	1,570	1,570

No. 6. STATEMENT COMPARING CHARGES TO DATE WITH BANCTIONAL ESTIMATES

Particulars	Charges Against Closed Sanctions			Charges For Date				Difference	
	Expenditure less against Contract Estimates	Expenditure against open sanction Estimates	Total	Charg e to date	Amount of expenditure specified in Banc tion Estimate, Dated as per sanction	Total expenditure against closed sanction Estimates			
				Rs.	Rs.	Rs.	Rs.		
Other Charges									
Works	..	1,776	1,776	1,776	..	..	1,776	1,776
Establishments	..	30,250	30,250	30,250	..	..	30,250	30,250
Tools and Plant	..	810	810	810	..	..	810	810
	Total	..	32,836	32,836	..	32,836	32,836		
Less Receipts on Capital Account	..	..	..	..	..	..	..	..
	Net Total	..	32,836	32,836	..	32,836	32,836		
INDIRECT CHARGES—									
Capitalised abstraction of Land Revenue	5,634	..	5,634	..	..	..	5,634	
Leave and Pension Allowances	4,613	880	5,493	..	..	..	4,613	
	Total	..	10,127	10,127	..	10,127	10,127		
GRAND TOTAL	..	2,15,914	9,107	2,25,021	..	..	2,25,021	

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Ghaggar Canal Project.

No. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1918-19.

HEAD OF ACCOUNT.	DIRECT CHARGE.								
	Imperial.			Contribution.			Total.		
	Previous.	1918-19.	Total.	Previous.	1918-19.	Total.	Previous.	1918-19.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1.—WORKS.									
1.—Head Works—									
A.—Land	492	..	492	288	..	288	720	..	720
C.—Works	50,617	..	50,617	39,878	..	39,878	90,695	..	90,695
K.—Buildings	2,186	..	2,186	1,468	..	1,468	3,644	..	3,644
Total	62,435	..	62,435	41,624	..	41,624	1,04,059	..	1,04,059
2.—MAIN CANAL AND BRANCHES.									
A.—Preliminary Expenses	7,569	..	7,569	5,040	..	5,040	12,615	..	12,615
B.—Land	8,750	..	8,750	8,294	..	8,294	17,044	..	17,044
D.—Regulators	10,682	..	10,682	8,434	..	8,434	28,116	..	28,116
E.—Falls and Weirs	1,861	..	1,861	5,040	..	5,040	6,910	..	6,910
G.—Bridges	24,076	..	24,076	27,000	..	27,000	51,776	..	51,776
H.—Escarpments	13,188	..	13,188	5,051	..	5,051	18,839	..	18,839
K.—Buildings	8,912	2,302	8,214	13,305	576	14,071	21,307	2,676	24,186
L.—Earthwork	77,205	..	77,205	1,10,100	..	1,10,100	1,87,814	..	1,87,814
O.—Miscellaneous	1,837	..	1,837	2,688	..	2,688	4,425	..	4,425
Total	1,66,080	2,302	1,68,382	1,88,265	576	1,88,841	8,48,345	2,878	3,51,223
3.—DISTRIBUTORIES—									
A.—Preliminary Expenses	403	..	403	..	..	..	403	..	403
B.—Land	3,933	..	3,933	..	..	..	3,933	..	3,933
C.—Works	17,995	..	17,995	..	..	..	17,995	..	17,995
L.—Earthwork	20,210	..	20,210	..	..	..	20,210	..	20,210
O.—Miscellaneous	14,783	..	14,783	8,745	..	8,745	23,528	..	23,528
Total	60,324	..	60,324	8,745	..	8,745	7,0,009	..	76,090

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Chhagger Canal Project.

No. 2—CAPITAL ACCOUNT FOR AND TO END OF 1918-19.

HEADS OF ACCOUNT.	DIRECT CHARGES.										Total of receipts & expenses carried forward from Year ending 31st March Year 1917-18.	Balances transferred to next Year.		
	Imperial.			Centrale			24.1							
	Previous Year	1918-19	Total	Previous Year	1918-19	Total	Previous Year	1918-19	Total					
4.—DRAINAGE AND PROTECTIVE WORKS														
1.—Earthwork	..	5,01	..	6,01	..	..	..	5,01	..	5,01	..	..
TOTAL	..	5,01	..	6,01	..	..	..	5,01	..	5,01	..	..
TOTAL 1.—WORKS	..	294,610	2,362	2,96,972	6,37,634	6,37,634	27,120	37,278	2,37,278	37,120	77,502	525,331		
II.—ESTABLISHMENT														
5.—Direction and Account	..	13,915	..	13,915	..	..	..	13,915	..	13,915	..	..
6.—Executive	..	47,632	70	47,632	8,423	8,423	2,031	2,031	2,031	24,620	435	4,074,454		
7.—Medical	..	7,457	..	7,457	..	..	..	7,457	..	7,457	..	..
Leave and Pension Allowances	..	..	..	..	5,457	5,457	18	5,457	5,457	18	5,457	..
TOTAL	..	62,122	70	62,122	13,946	13,946	2,031	13,946	13,946	24,620	435	4,074,454		
III.—TOOLS AND PLANT.														
12.—Miscellaneous	..	7,953	34	7,957	2,734	2,734	0	7,943	10,457	43	10,450	..		
TOTAL	..	7,953	34	7,957	2,734	2,734	0	7,943	10,457	43	10,450	10,259		
GRAND TOTAL	..	3,63,255	3,042	3,66,407	1,65,184	1,65,184	32,141	20,810	3,771	16,31,502	146,020	51,652		
V.—LESS RECEIPTS ON CAPITAL ACCOUNT.														
Net Total	..	1,06,363	3,042	1,08,407	2,55,454	2,55,454	732	2,46,156	4,60,810	3,774	6,51,503	6,53,030	6,81,652	
APPORTIONMENT.														
42.—M. W. AND NAVIGATION, IMPERIAL	1,06,765	3,042	1,08,407	2,55,454	732	2,46,156	6,0,910	3,774	6,51,503	2,65,030	6,51,652			

(a) Share of Accounts Establishment excluded for the years 1918-19 to 1917-18.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Ghaggar Canal Project.

No. 3—REVENUE ACCOUNT FOR AND TO END OF 1919-20.

RECEIPTS.	IMPERIAL			CONTRIBUTION.			TOTAL.			
	Previous.	1918-19	Total.	Previous	1918-19	Total.	Previous	1918-19	Total.	
Occupiers rates	..	Rs. 1,01,801	Rs. 12,277	Rs. 1,74,168	..	Rs. ...	Rs. ..	Rs. 1,01,801	Rs. 12,277	Rs. 1,74,168
Receipts from Plantation	..	2	..	2	2	..	2	4	..	6
Receipts from other Canal produce.	1	..	1	1	..	1
Rent of Buildings	..	232	..	232	148	..	148	380	..	380
Fines	..	260	..	260	70	..	70	330	..	330
Miscellaneous and other Receipts,	184	..	184	120	..	120	304	..	304	
Total	..	1,62,560	12,277	1,74,846	341	..	341	1,62,910	12,277	1,75,187
TOTAL RECEIPTS	..	1,62,560	12,277	1,74,846	341	..	341	1,62,910	12,277	1,75,187

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Ghaggar Canal Project.

No. 3-REVENUE ACCOUNT FOR AND TO END OF 1918-19.

Charges.	Incurred.			Expenditure.			Total.		
	Previous.	1918-19.	Total	Previous.	1918-19.	Total	Previous.	1918-19.	Total
(1).- EXTENSIONS AND IMPROVEMENTS.									
(1).- Head Works	10,400	00	10,400	1,727	00	1,727	15,737	00	15,737
(2).- Main Canal and Branches	17,097	00	17,097	2,494	00	2,494	17,491	00	17,491
(3).- Distributaries	4,845	00	4,845	00	00	00	4,845	00	4,845
(4).- Drainage and Protective Works.	501	00	501	00	00	00	501	00	501
Total (1)	22,443	00	22,443	6,224	00	6,224	28,667	00	28,667
(2).- MAINTENANCE AND REPAIRS.									
(1).- Head Works	31,713	00	31,713	21,072	00	21,072	22,992	00	22,992
(2).- Main Canal and Branches	16,724	00	16,724	22,721	00	22,721	17,947	00	17,947
(3).- Distributaries	28,741	00	28,741	00	00	00	28,741	00	28,741
(4).- Drainage and Protective Works.	542	00	542	00	00	00	542	00	542
Total (2)	77,079	00	77,079	43,715	00	43,715	52,634	00	52,634
(3).- COMPENSATION.									
(4).- ESTABLISHMENT.	10,187	00	10,187	00	00	00	10,187	00	10,187
(5).- General Establishment in Uptown Directorate and Accountant's Office.	75,871	00	75,871	48,271	00	48,271	62,941	00	62,941
(6).- Extra Urban Establishment	2,01,822	00	2,01,822	17,027	00	17,027	2,18,849	00	2,18,849
(7).- Medical Do	6,702	00	6,702	00	00	00	6,702	00	6,702
(7 A).- Refund in Do	17,531	00	17,531	1,40,150	00	1,40,150	1,57,681	00	1,57,681
(8).- Legal and Taxation Allowances	00	00	00	2,074	00	2,074	2,074	00	2,074
Total	331,210	00	331,210	21,621	00	21,621	7,01,117	00	7,01,117
(9).- TOOLS AND PLANT.									
(10).- Miscellaneous	-773	00	-773	00	00	00	00	00	00
(11).- Repairs and Calibrations	5,167	00	5,167	1,068	00	1,068	4,512	00	4,512
Total	5,167	00	5,167	1,068	00	1,068	4,512	00	4,512
(12).- REFUNDS OF REVENUE.									
Total	5,432	00	5,432	00	00	00	2,174	00	2,174
Indirect charges debitable to Revenue Account as per Account No. 5.	6,16,536	10,220	6,16,536	11,17,651	2,724	11,17,651	7,07,361	22,750	7,07,361
Total Charges	6,16,536	10,220	6,16,536	11,17,651	2,724	11,17,651	7,07,361	22,750	7,07,361
BALANCE NET REVENUE	-4,76,705	-8,511	-4,76,705	-1,19,416	-2,650	-1,19,416	-5,05,121	-11,373	-5,05,121
GRAND TOTAL.	1,52,500	12,277	1,52,500	12,277	00	12,277	1,02,910	12,277	1,02,910

(a) Includes Rs. 369 on account of fees for collection of Revenue.

(b) Share of Accounts Establishment excluded from 1912-13 to 1917-18.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF THE ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Chaggar Canal Project.

No. 5.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1918-19.

Particulars.	Previous.		1918-19.	Total.	
	Rs.	Rs.	Rs.	Rs.	
CAPITAL—					
Capitalization of abatement of Land Revenue	..	..	..	2,000	
Leave and Pension Allowances	..	Imperial ..	8,792	98	8,890
	Contribution ..	..	5,430	18	5,448
		Total ..	16,231	116	16,347
Deduct—Leave and Pension Allowances debitable to Bikaner State treated as direct charges and transferred to Account No. 2 of the canal.			5,430	18	5,448
		Net debitable to Imperial ..	10,792	98	10,890
REVENUE—					
Capitalization of abatement of Land Revenue	..	..	..	..
Leave and Pension Allowances	..	Imperial ..	51,948	1,493	53,441
	Contribution ..	..	3,056	71	3,127
		Total ..	55,004	1,564	54,568
Deduct—Leave and Pension Allowances debitable to Bikaner State treated as direct charges and transferred to Account No. 3 of the canal.			3,056	71	3,127
		Total ..	51,948	1,493	51,461

No. 6.—STATEMENT COMPARING CHARGES TO DATE WITH SANCTIONED ESTIMATE.

PARTICULARS.	CHARGE AGAINST CLOSED SANCTIONS.			CURRENT SANCTIONS.			Total charge to date against old and current sanctions.	REMARKS.		
	Expenditure against Construction Estimate.	Expenditure against open canal sanctions.	Total.	Charges to date.	Amount of sanctioned Estimate.	Unspent Balance of Estimate.				
				Rs.	Rs.	Rs.				
DIRECT CHARGES—										
Wor. > Establishment	..	4,08,214	35,021	5,33,241	2,911	2,091	—220	5,36,152		
Tools and Plant	..	1,00,070	8,971	1,07,941	..	617	617	1,07,441		
Total	..	10,048	431	10,501	..	40	40	10,500		
Net Total	..	6,00,232	42,150	6,51,632	2,911	3,348	437	6,54,603		
INDIRECT CHARGES—										
Capitalized or abatement of Land Revenue	1,000	100	2,000	..	..	..	..	2,000
Leave and Pension Allowances ..	7,008	922	8,800	..	..	..	..	8,800
Total	..	8,008	1,022	10,800	2,911	..	..	10,800
Grand Total	..	6,18,100	43,472	6,61,572	2,911	3,346	437	6,65,183		

Secretary's No. 1770 W. I., dated 11th
May 1918, Rs. J. 345.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-'19.

Lower Sutlej Inundation Canals including Hajiwah Canal Project.

NO. 3—REVENUE ACCOUNT FOR AND TO END OF PERIOD.

RECEIPTS.	IMPERIAL			CHARACTER.	INDIA		
	Previous.	1918-'19.	Total.		Previous.	1918-'19.	Total.
Occupiers' Dues ..	Rs 50,51,424	2,73,170	12,13,912	1.—EXTENSIONS AND IMPROVEMENTS 2.—MAIN CANAL & BRANCHES 3.—DRAINAGE WORKS	Rs 2,10,292	91,016	101,211
Sale of water ..	3,215	30	3,245	1.—Drainage and Protective Works 2.—Water (1)	3,17,887	—	3,17,887
Receipts from Plantations ..	70,710	1,657	72,367	2.—PAINTING AND BRIDGES 3.—Main Canal & Branches 4.—Drainage Works	2,11,321	22,102	23,223
Receipts from other Canal projects ..	Rs 273	261	Rs 300	1.—Drainage Works 2.—Compensation	2,14,141	11,646	23,186
Rent of Buildings ..	—	—	—	3.—ESTABLISHMENT	—	—	—
Fines ..	Rs 2,600	1,570	Rs 4,170	1.—Buildings and Equipment (1) 2.—Furniture, Fixtures, etc. 3.—Wages, etc. 4.—Repairing, etc.	1,62,777	19,747	82,323
Miscellaneous and other Receipts ..	—	—	—	5.—TELEGRAPH PLANT	1,20,703	1,20,703	1,20,703
Total. ..	Rs 11,23,770	2,33,970	13,57,740	6.—MATERIALS 7.—LABOUR 8.—OPICS, FURNITURE, 9.—BRASS AND CARRIAGE 10.—EQUIPMENT	47,123	12,016	59,039
Contribution ..	12,45,630	—	12,45,630	11.—REFUNDS OF REVENUE PROFIT AND LOSS. 12.—REVENUE ACCOUNT Miscellaneous Advances ..	4,220	—	4,220
Other Labour ..	Rs 20,21,110	—	Rs 20,21,110	13.—PURCHASE Stock Valuation ..	20,733	2,502	23,235
Share of Land Revenue collected in the Civil Department ..	97,83,123	2,73,700	1,00,56,823	Total. ..	—	—	—
TOTAL RECEIPTS ..	1,00,77,000	5,33,710	1,06,10,710	14.—Labour ..	10,21,110	—	10,21,110
				Total. ..	1,17,10,210	3,26,740	1,10,71,070
				Indirect charges debitable to Revenue Account as per Account No. 5.	1,01,710	18,210	4,19,041
				Total Charges ..	1,11,40,410	4,43,600	1,14,94,410
				Balance, Net Revenue ..	70,20,35	1,91,712	81,22,047
				GRAND TOTAL ..	1,06,77,070	5,33,714	1,09,10,764

(a) Share of Accounts Establishment excluded from 1912-13 to 1917-18.

(b) Includes a sum of Rs. 7,165 on account of fee for collection of Revenue.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Lower Sutlej Inundation Canals including Hajiwah Canal Project.

No. 6.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1918-19.

Particulars.	Previous.	1918-19.	Total.
	Rs.	Rs.	Rs.
REVENUE—			
Capitalisation abatement of Land Revenue ..	5	..	..
Leave and Pension allowances ..	4,01,190	18,260	4,19,450
Total ..	4,01,200	18,260	4,19,460

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Lower Sutlej Inundation Canals (Hajiwah Canal Project)

No. 3.—REVENUE ACCOUNT FOR AND TO END OF 1918-19.

Receipts	IMPERIAL			Charges	IMPERIAL		
	Previous Year	Current Year	Total		Rs.	P.	Rs.
Occupiers' rates	Rs. 5,44,781	Rs. 21,333	Rs. 5,66,114	(1) EXTENSIONS AND IMPROVEMENTS (1).—MAIN CANAL & BRANCHES (2).—DISTRICT STAKES Total (1) ..	27,425	..	Rs. 27,425
Sale of water	..	..	..	(2) MAINTENANCE AND REPAIRS (1).—Main Canal & Branches (2).—District Stakes ..	2,6161	6,274	Rs. 27,695
Receipts from Plantations ..	187	..	187	Total (2) ..	19	..	19
Receipts from other Canal Produce	35	..	35	(3).—COMPENSATION (1).—ESTABLISHMENT (2).—District or Sub-Agency (3).—PARTICULAR EXPENSES REST ..	..	..	..
Miscellaneous and other Receipts	60	..	60	7 (A).—REVENUE DEPT. ..	40,719	..	40,719
				Total ..	1,47,589	4,274	Rs. 151,863
				(B).—TOOLS & PLANT (C).—NAVIGATION PLANT ..	..	..	..
				(D).—MISCELLANEOUS ..	2,800	67	2,867
Total ..	Rs. 5,44,584	Rs. 21,333	Rs. 5,66,117	(E).—RENTALS AND FARMARY Total ..	2,100	..	Rs. 2,100
				(F).—REFUNDS OF REVENUE SUIT 7.—PROFIT AND LOSSES	120	..	120
Share of land revenue collected in the Civil Department	Rs. 36,912	Rs. 23,031	Rs. 59,943	Total ..	1,48,751	16,704	Rs. 165,455
				In direct Charges debited to Revenue Accounts as per Account No. 5.	20,501	695	21,196
				Total Charges ..	4,99,148	11,216	Rs. 50,364
				Balance, Net Revenue ..	6,11,481	41,497	Rs. 6,52,978
TOTAL RECEIPTS ..	10,80,826	52,613	11,33,439	Grand Total ..	10,80,826	52,613	11,33,439

(p) Share of Account Establishment for 1912-13 to 1917-18 excluded.

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IRRIGATION BRANCH,

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Lower Sutlej Inundation Canals and Hajiwah Canal Project.

No. 8.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1918-19.

Particulars,	Previous,	1918-19,	Total,
REVENUE—			
Leave and Pension Allowances	20,564	698	21,162
Total	20,564	698	21,162

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Chenab Inundation Canals Project.

No. 2.—REVENUE ACCOUNTS FOR AND TO END OF 1918-19.

Description	DEPARTMENT			DEPARTMENT				
	Previous		1918-19	Total	Previous		1918-19	Total
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Debtors—Salaries ..	30,81,930	1,07,912	32,89,842		1) —EXTENSIONS AND IMPROVEMENTS,	Rs.	Rs.	Rs.
					(1) —MAINS CANAL & BRANCHES	9,31,242	1,846	9,33,151
					(2) —DRAINAGE TABLES	1,27,102	3,109	1,27,311
Sal. of water ..	... 3,702	674	4,376		3) —Drainage App. Projects &c Works	9,414	1,809	11,223
					Total	30,4772	6,744	31,1772
Receipts from plantation ..	1,15,137	6716	1,21,853		4) —MANAGEMENT AND REPAIRS,	..	..	..
					(1) —Mains Canal & Branches	35,04,700	67,810	35,71,510
Receipts from other Canal Projects ..	45,425	16	45,441		(2) —Drainage Tables	1,03,614	16,716	1,10,330
					(3) —Drainage App. Projects &c Works	1,27,102	3,109	1,27,311
Cost of Buildings ..	1,948	372	2,321		4) —COMPENSATION	..	..	..
					(1) —GENERAL ESTABLISH- MENT INCLUDING COST OF WORKS	1,27,242	47,254	174,500
Fines ..	40,000	662	41,662		(2) —Drainage App. Projects &c Works	17,142	37,251	54,403
Miscellaneous and other Receipts ..	3,622	666	4,288		(3) —Drainage App. Projects &c Works	..	..	..
					Total	52,4772	72,814	55,29162
Total ..	32,89,322	2,00,012	34,89,334					
Contribution ..	11,47,606	..	11,47,606		1) —TOOLS & PLANT,	..	604	604
					(1) —Mains Canal & Branches	22,424	..	22,424
Other Labour ..	24,05,111	..	24,05,111		(2) —Drainage Tables	..	..	..
					6) —REVENUE OF REVENUE,	21,154	600	21,754
Total ..	64,13,782	2,00,012	74,13,794		7) —PROFIT AND LOSS	425	..	425
Shares of land revenue col- lected in Civil Department	1,61,61,165	3,65,715	1,61,60,313		Total	1,23,740	1,75,354	20,75,154
					Other Land &c ..	24,05,111	..	24,05,111
					Total	21,37,994	1,75,354	21,37,992
					Indirect C' regis debitable to Revenue Account as per Account No. 5.	3,44,306	10,293	3,74,599
					Total Charges ..	32,91,302	1,75,651	35,75,953
					Balance, Net Revenue ..	73,91,622	1,32,111	73,96,933
Total Receipts ..	1,60,95,120	4,77,702	1,64,72,822		GRAND TOTAL ..	1,60,95,120	1,32,760	1,64,72,820
						16,97,572	1,77,622	

(4) Share of accounts establishment excluded from 1912-13 to 1917-18.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

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Chenab Inundation Canals Project.

No 5.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1918-19.

Particulars.	Previous.	1918-19.	Total.
	Rs.	Rs.	Rs.
REVENUE—			
Capitalisation abatement of Land Revenue ..	8,536		8,536
Leave and Pension allowances ..	3,66,960	10,293	3,66,153
Total, ..	3,64,896	10,293	3,74,089

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Mugastargarh Inundation Canals Project.

No. 3.—REVENGE ACCOUNT FOR AND TO END OF 1914.

Receipts.	INCOME			CHARGE			EXPENSES		
	Previous	1918-19	Total	Previous	1918-19	Total	Previous	1918-19	Total
Occupant rates	Rs.	Rs.	Rs.	1 - EXPENSES AND IN- PROVISIONS 1.1 - Rent, Taxes & Dues etc.	Rs.	Rs.	Rs.	Rs.	Rs.
	27,52,466	2,69,587	30,22,053	2.1 - Maintenance & Repairs	7,15,177	9,167	7,24,344		
Sales of water	Rs.	Rs.	Rs.	2.2 - Purchase of Services	1,09,910	12,672	1,22,582		
	1,254	7	1,261	3.1 - Purchase of Goods	2,22,224	0	2,22,224		
Receipts from plantations	Rs.	Rs.	Rs.	3.2 - Purchase of Water	1,10,187	0	1,10,187		
	1,42,670	6,743	1,49,413	3.3 - Total (1)	6,18,110	11,781	6,30,891		
Receipts from other Canal produce	Rs.	Rs.	Rs.	4 - MAINTENANCE AND REPAIRS	25,16,240	1,73,850	26,89,090		
	7,617	409	7,626	5.1 - Main Canal & Branches	2,72,510	2,012	2,74,522		
Bites	Rs.	Rs.	Rs.	5.2 - Dredging Canals	2,72,510	2,012	2,74,522		
Miscellaneous and other Receipts	Rs.	Rs.	Rs.	5.3 - Dredging Works	10,187	0	10,187		
	10,270	839	10,359	5.4 - Total (2)	35,06,837	4,02,321	37,09,158		
Total	Rs.	Rs.	Rs.	6 - COMPENSATION	7,124	0	7,124		
	29,60,785	2,76,513	30,22,300	6.1 - General Expenses including Purchase of Land, Tax etc.	6,18,110	0	6,18,110		
Contribution	Rs.	Rs.	Rs.	6.2 - Excessive Production etc.	12,01,672	0	12,01,672		
Other Labour	Rs.	Rs.	Rs.	7.1 - Rents	5,11,741	22,322	5,34,063		
	24,34,633	0	24,34,633	7.2 - Total	2,72,510	2,012	2,74,522		
Total	Rs.	Rs.	Rs.	7.3 - Tools and Plant	1,10,187	0	1,10,187		
Share of land revenue col- lected in the Civil Depart- ment	Rs.	Rs.	Rs.	7.4 - Purchase of Tools etc.	1,10,187	0	1,10,187		
TOTAL RECEIPTS	Rs.	Rs.	Rs.	7.5 - Total Tools and Plant	1,10,187	0	1,10,187		
	1,14,88,304	2,61,578	1,16,08,882	8 - REIMBOSSES OF EXPENSES	4,18,110	0	4,18,110		
				8.1 - Purchase of Goods	4,18,110	0	4,18,110		
				8.2 - Purchase of Water	0	0	0		
				8.3 - Total	4,18,110	0	4,18,110		
				9 - Indirect Charges (details to Revenue Account or part Account No. 5)	4,29,420	10,187	4,49,607		
				9.1 - Total charges	4,29,420	10,187	4,49,607		
				9.2 - Balance, Net Revenue	82,01,747	20,749	82,22,496		
				9.3 - GRAND TOTAL	1,16,12,604	6,10,187	1,16,82,791		

(a) Includes Rs. 6,417 on account of fees for collection of Revenue.
 (b) State of Account Establishment excluded from 1912-13 to 1917-18.

IRRIGATION BRANCH.

PUNJAB PROVINCE

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Chenab Inundation Canals Project.

No. 5—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1918-19.

Particulars,	Previous.	1918-19.	Total.
	Rs.	Rs.	Rs.
REVENUE—			
Capitalisation abatement of Land Revenue	18,315	800	18,655
Leave and Pension Allowances	4,11,025	18,845	4,29,870
Total	4,29,380	10,185	4,48,565

IRRIGATION BRANCH.

PUNJAB PROVINCE

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Shahpur Canal Project - Provincial.

No. 2.—REVENUE ACCOUNTS FOR AND TO END OF 1918-19.

REVENUE.	PROVINCIAL			CHARGES.	INDIAFAR.		
	RS. P. L.	RS. P. L.	Total		RS. P. L.	RS. P. L.	Total
Occupiers' rates	Rs. 9,23,570	Rs. 23,484	Rs. 9,46,054	(1).—EXTENSIONS AND IMPROVEMENTS. (a).—Main Canal & Branches. (b).—Tributaries ..	Rs. 35,743 11,457	Rs. ..	Rs. 47,200
Sale of water	Rs. 6,023	..	Rs. 6,023	TOTAL (1) ..	Rs. 170	Rs. ..	Rs. 47,200
Receipts from Plantations	Rs. 104	..	Rs. 104	(2).—MAINTENANCE AND REPAIRS. (a).—Main Canal & Branches. (b).—Tributaries ..	Rs. 233,120 78,810	Rs. 15,120 9,320	Rs. 247,720 65,120
Receipts from other Canal Tributaries	450	..	450	Total (2) M.A.R. ..	Rs. 249,650	Rs. 15,120	Rs. 264,770
Water power	Rs. 926	..	Rs. 926	(3).—ESTABLISHMENT (a).—Extension and re- pair. (b).—Forester's Fresh water (c).—General Inv. ..	Rs. 2,029 1,250 2,256	Rs. ..	Rs. 4,33,525
Fees	Rs. 713	..	Rs. 713	(4).—RENTS & DUES ..	Rs. 424,516	Rs. 15,624	Rs. 440,140
Miscellaneous and other Receipts	Rs. 5,723	..	Rs. 5,723	(5).—TOOK A PLANT. (6).—Maintenance ..	Rs. 1,677 1,070	Rs. 621	Rs. 2,338
Total	Rs. 9,15,823	Rs. 23,144	Rs. 9,38,967	(7).—RENTALS AND CASH BRAKES.	Rs. 3,152	Rs. 721	Rs. 3,873
				TOTAL ..	Rs. 4,146	Rs. ..	Rs. 4,146
				Indirect Charged Under to Revenue Account as per Account No. 5.	Rs. 570,147	Rs. 15,624	Rs. 585,771
Rents of Land Revenue collected in the Civil Department.	Rs. 2,05,100	Rs. 12,130	Rs. 2,17,230	TOTAL CHARGES ..	Rs. 50,940	Rs. 10,010	Rs. 60,950
Total Receipts	Rs. 11,65,926	Rs. 41,614	Rs. 11,67,540	Balance, Net Revenue ..	Rs. 25,686	Rs. 505	Rs. 25,731

(a) Includes Rs. 700 on account of fees and allowances for collection of Revenue.

(b) Share of Accounts Establishment excluded from 1912-13 to 1917-18.

- IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Shahpur Canal Project—Provincial.

No. 5.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1918-19.

Particulars.	Previous.	1918-19.	Total.
	Rs.	Rs.	Rs.
REVENUE—			
Capitalisation of abatement of Land Revenue ..	1,603	—	1,603
Leave and Pension Allowances ..	59,400	2,754	62,160
Total ..	61,000	2,751	63,753

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Ravi Inundation Canals Project.

No. 3.—REVENUE ACCOUNT FOR AND TO END OF 1918-19

Receipts	Debitors			Charges	Bal. Due		
	Previous		1918-19		Previous, 1918-19		Total
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
Occupier's rates ..	1,02,573	..	1,05,273	1) — EXPENDITURE AND IMPROVEMENTS 2) — Main Canal and Branches	800	..	800
				Total (1)	..	..	800
Sale of water ..	27	..	297	3) — MAINTENANCE AND REPAIRS 4) — Main Canal and Branches 5) — Dredging rates ..	82,257	..	82,257
				Total (2) V. and R. ..	82,257	..	82,257
Taxes ..	20	..	25	6) — COMMISSION 7) — FEE & REMUNERATION 8) — Dredging rates & D. Ac 9) — Dredging Expenses 10) — Merchandise 11) — Rates &c D. ..	1,11,023	..	1,11,023
Miscellaneous and other Receipts ..	..	..	8	Total ..	1,11,746	..	1,11,746
				12) — TOOLS AND PLANT	..	..	..
				13) — REVENUE INVESTMENT	1,522	..	1,522
				14) — REPAIRS AND CAPITALISATION	715	..	715
Total ..	1,02,611	..	1,05,614	Total ..	2,027	..	2,027
				—REFUNDS OF RECEIVED VALUE	1,000	..	1,000
				Total ..	1,42,612	..	1,42,612
Share of Land Revenue c. lettd. in the Civil Department.	1,27,500	..	1,27,500	Indirect Charges debited to Revenue Account as per Account No. 5	19,424	..	19,424
				Total Charges ..	2,61,106	..	2,61,106
				Balance, Net Revenue ..	—28,043	..	—28,043
Total Receipts ..	2,33,423	..	2,33,423	Gross Total ..	2,33,423	..	2,33,423

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1918-19.

Ravi Inundation Canals Project.

No 6.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1918-19.

Particulars.	Previous.	1918-19.		Total.
		Rs.	Rs.	
Revenue—				
Leave and Pension allowances	—	10,424	—	10,424
Total	..	10,424	..	10,424